

# The Mining Journal

## AND ATMOSPHERIC RAILWAY GAZETTE,

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 533.—VOL. XV.]

LONDON: SATURDAY, NOVEMBER 8, 1845.

[PRICE 6D.]

**TAVISTOCK.**—The delightful cottage residence, inhabited by Mr. B. Messinger, Esq., the proprietor, situated in the above parish, and known as **BEAUFORT COTTAGE**, will be OFFERED FOR SALE, BY PUBLIC AUCTION, at the New Inn, in Callington, on Thursday, the 13th November next, at Three o'clock in the afternoon, by Mr. WILLIAM MURRAY, Auctioneer. The dwelling-house, comprising dining and drawing-rooms, six bed-rooms, and dressing-rooms, kitchen, &c., is built in cottage style on the ground floor, with thatched roof, and verandah covered with evergreen; coach-house, stabling, and cow-house, &c. adjoin.

Attached to the above are about thirteen acres of land, of which half an acre is kitchen garden, two acres used for village or pasture, and the remainder is appropriated as pleasure grounds, consisting of ornamental grass slopes, luxuriant shrubberies and plantations (mostly of mature growth), intersected by serpentine walks, altogether most tastefully disposed, and contained within a ring fence.

This charming spot, seated on the turnpike-road between Tavistock and Callington, distant about four and a half miles from either place—looks down upon the deep valley of the Tamar, precisely where it presents its most striking beauties, the woods and rocky heights of Mount Edgumbe, with the windings of the river beyond, and distant views of Mount Edgumbe and the Dartmoor Hills. The most indifferent observer cannot pass this spot without his attention being arrested by the magnificence of the scene. Fox hounds and harriers, and rivers abounding in fish, furnish the sportsman with constant occupation.

Immediate possession may be had, the proprietor being about to remove from the neighbourhood. The premises may be viewed by applying at the house; and further information obtained at the office of Mr. Pedler, solicitor, Liskeard.

Liskeard, October 27, 1845.

### SOUTH STAFFORDSHIRE.

**HORSELEY IRON-WORKS, TIPTON.**—TO IRON-MASTERS, IRONFOUNDERS, ENGINEERS, &c.—TO BE SOLD, BY AUCTION, by Mr. T. DANKS, on Monday, November 24th, 1845, at the Dudley Arms Hotel, in Dudley, at Four o'clock in the afternoon, subject to such conditions as will be then and there produced, the ENTIRETY and LEASE of those well-known and justly celebrated WORKS, situated at TIPTON, in the county of Stafford, formerly carried on for many years by Messrs. Tipton, Harrison, and Co., and lately by Messrs. Bramah, Cochrane, and Dealey (by whom great improvements and additions have been made), and known as **THE HORSELEY IRON-WORKS.**

The entire premises comprise immense FOUNDRIES, calculated to carry on that department to any extent, and fitted with large and small double and single-acting iron cranes, with blocks and chains complete; stores, air-furnaces, cupolas, pipe-pits, &c.; to these are connected TWO BLAST-FURNACES, with a most powerful ENGINE, cylinder 42 inches diameter, 8-feet stroke, with three oblong fire-boilers, 24-feet by 6-feet 6 inches long, with blowing apparatus complete; a PORTABLE bright 10-horse ENGINE, which has been used for drawing up the materials to the furnaces; extensive anvil shops, with numerous hammers, double and single cranes, hammers, bellows, &c.; a 4-horse PORTABLE ENGINE and regulating damper, complete; THREE LARGE PUNCHING PRESSES, guillotine, planing press, and counter-sinking machine; immense and powerful wood wharf frame, with iron columns, gear, and chain, complete; bed and side lathes, boring mill, large and small planing machines, drilling machines, with driving apparatus, complete; a MARINE ENGINE, sailing machines, screwing machines, travelling winches, &c.; a large lathe, with lifting gear, &c.; to which are annexed iron rolling mills, blocks, with ropes, complete; a 30-horse power horizontal HIGH-PRESSURE ENGINE, with cylinder, 17 inches diameter; large face plate lathe, capable of turning twenty feet diameter, with planed iron beds; one single and two double sliding rests, driving apparatus, complete; a 6-horse HOUSE ENGINE, boring and turning mill, double and single weighing machines, cranes, loam, and blacking mills, refineries, patternmakers' shops, and lathes; immense range of fitting and workshops, which are fitted up with work benches, vices, &c.; extensive warehouses and sheds, pipe-proving machine, stables, most convenient and extensive offices, which are fitted up with every convenience; furnace and foundry wharfs and yards; also a very large inner yard for engineering purposes, surrounded by workshops and warehouses, with large entrance folding-doors. In the centre of the works is a gasometer for making gas for lighting the whole premises.

The whole of these extensive works are enclosed by a wall, except such parts as are bounded by the canal, and are capable of any extent of business, either in the foundry or engineering departments, and are not only complete in all respects, but may be put in full operation in a few days. There will also be included in this sale the HORSELEY HOUSE, which is in every way fit for the residence of a principal or manager; it comprises dining, drawing, and breakfast rooms, kitchen, entrance hall, numerous bed rooms, and wine cellars, garden, vineyard, and pleasure grounds, stables, and coach-houses, and about six acres of meadow land. The approach is by a handsome carriage drive from the main road leading from Tipton to Walsall, &c.

The principal part of the machinery was manufactured by Messrs. Sharp, Roberts, and Co., and by Messrs. Hall and Co. More full and descriptive particulars will be given in the catalogue, which will be ready in a few days, and will be sent to any part of the kingdom on application. The whole of the said works, house, land, and premises, are held for a term of twenty-one years from the 25th day of March, 1844 (terminable at the option of the lessee at the end of the first seven or fourteen years), at the low rent of £250 per annum. The whole of the said works, house, land, and premises, will be offered for sale in the first instance as an entirety, and if not sold the foundries, with the house and land, will then be put up separately, and if then not sold, will be put in full operation in a few days. There will also be included in this sale the HORSELEY HOUSE, which is in every way fit for the residence of a principal or manager; it comprises dining, drawing, and breakfast rooms, kitchen, entrance hall, numerous bed rooms, and wine cellars, garden, vineyard, and pleasure grounds, stables, and coach-houses, and about six acres of meadow land. The approach is by a handsome carriage drive from the main road leading from Tipton to Walsall, &c.

For further information apply to William Wills, Esq., solicitor, Waterloo-street, Birmingham; Samuel Dalton, Esq., solicitor, Dudley; or to the auctioneer.

Devonshire.—Tavistock Iron-Works, with the Residence of Ferrum Hill.

**MESSERS. SHUTTLEWORTH AND SONS** have received instructions from the trustees, under the will of the late proprietor, to SELL, BY AUCTION, at the Mart, in London, on Friday, November 29th, at Twelve o'clock, in four lots, an extremely valuable PROPERTY, comprising the

### MOUNT FOUNDEY, OR IRON-WORKS,

consisting of an extensive MANUFACTORY, with AIR and BLAST-FURNACES, HAMMER MILLS, PLATING, TURNING, ROLLING, BORING, and GRINDING MILLS, worked by water-power, and possessing every requisite apparatus for an establishment of the first-class, together with the valuable goodwill attaching to the premises, which have been established nearly forty years, for the supply of agricultural and mining implements and castings of every description, and are now in full operation. The situation is very commanding, close to the town of Tavistock, in a large and rapidly-increasing mining district, only fourteen miles from Plymouth, with water carriage by the River Tamar and the Mineral Canal, and companies are forming for the construction of railways, which will create additional facilities with all the surrounding districts. Also the attractive VILLA RESIDENCE OF FERRUM HILL, with every necessary accommodation for a genteel family, with coach-house, stables, gardens, and pleasure grounds, and several inclosures of superior meadow and pasture land, comprising in the whole about twenty acres, including several slight sites for building. The property is held under lease from his Grace the Duke of Bedford for a long term, at very low ground rents.

May be viewed by tickets, which may be obtained of Messrs. Bridgman and Scobell, solicitors, Tavistock; of Messrs. George and Joseph Pridmore, solicitors, Plymouth; the manager of the works; at the Mart; and of Messrs. Shuttleworth & Sons, Poultry, London.

### TO CAPITALISTS AND MINE OWNERS.

**ADVANTAGEOUS INVESTMENT.**—TO BE DISPOSED OF, BY PRIVATE TREATY, TWO ADJOINING COLLIERIES, in full work, extending under a surface of about 100 acres, held under lease at the usual royalties, more than fifteen years of which being unexpired, and most eligibly situated on the line of one of the principal railways in North Wales, with every other facility for conveyance. The COALS are of well-known first quality, of unimpeded sale, and of a very superior approved coaling description. The present offers a most satisfactory investment for capital, and further information may be obtained, or explanation given, by applying by letter, with real name and address (as none but principals will be treated with), to Messrs. Yates, Cox, and Cox, 16, Brunswick-street; or to Mr. Samuel Routhwaite, 4, Cable-street, Liverpool.

### THE PATENT SAFETY FUSE.

FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and MOST EXPEDIENT MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this." Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, &c., Exeter, Cornwall.

### NOTICE TO THE PROPRIETORS AND SHAREHOLDERS OF MINES, SMELTING-WORKS, &c.

Messrs. MITCHELL and FIELD beg to inform the PUBLIC, that they have REMOVED from No. 5 to No. 28, HAWLEY-ROAD, KENTISH TOWN, where they have erected a spacious LABORATORY, fitted expressly for the performance of all OPERATIONS connected with MINING.—Particular instruction to gentlemen in Assaying, Mineral Analysis, and Manufacturing Chemistry in general.

Assays and Analyses conducted as usual.

All communications to be addressed to Messrs. Mitchell and Field, assayers, No. 28, Hawley-road, Kentish Town.

### ANDREW SMITH, PRINCES-STREET, LEICESTER-SQUARE, LONDON.

ENGINEER, MACHINIST, IRON AND BRASS FOUNDER, &c.

PATENTEE and MANUFACTURER of improved steam-engines, rapid steam generators, railway wheels, rails and chairs, propellers for canal and river navigation, reaping, mowing, and other machinery, raising and lowering machines, wharf, warehouse, and truck cranes, tramway, travelling, and stationary purchase crabs, tackle, &c. Also steam-engines and boilers, of various constructions; bone, sugar, and millwork, and machinery of every description manufactured and repaired.

See Mills, Breweries, and Distilleries attended.

PLANING, BORING, TURNING, SCREW-CUTTING, &c., FOR THE TRADE.

### GENERAL MINING COMPANY FOR IRELAND

Provisionally Registered under the 7th and 8th Victoria, cap. 110.

Capital £250,000, in shares of £25 each.

Deposit £2 10s. per share, as in detailed prospectus.

HONORARY DIRECTORS.  
Right Hon. Viscount Massereene and Ferrard, Antrim Castle  
Lord Dunally, Killybeg, Nenagh  
Hon. F. A. Frittle, Corvill, Roscrea  
Sir Thomas Esmonde, Bart. M.P., Wexford  
Sir John Macneil, LL.D., F.R.S., Rutland-square  
Pierse Somers Butler, Esq. M.P., County Kilkenny  
Robert J. Graves, Esq. Merion-square South

Right Hon. G. Lionel Dawson Damer, M.P. Portlanning, chairman of the Great Munster Railway Company  
Sir James Murray, Merion-square South  
Professor Apjohn, T.C.D., Baginbown-street  
John Darcy, Esq. Raheny House  
Thomas J. Quinton, Esq. De Vesce-terrace, Monkstown  
Pierse Nagle, Esq. Analease, Doneraile  
Francis White, Esq. Rutland-square  
A. Abraham, Esq. Southwark, London  
James Kerwan, Esq. T.C.D., Marlborough-street  
William K. Wilton, Esq. Grove House, County Dublin  
Finlay William Cusack, Esq. Camden-street, Dublin

The company is formed to aid in developing the mineral wealth of Ireland, which only requires the application of skill and capital to fully open out its rich mines of lead, copper, coal, iron, marble, &c. and to which the attention of British capitalists is now anxiously directed. Property in mines, lead, copper, and coal, can be promptly secured upon advantageous terms, so as to yield abundant profit to the proprietors, and to furnish employment for the labouring classes.—The extension of railways in Ireland must give additional value to mining property, from the facility of transit and increased intercourse, whilst the proprietors in the various railway companies must greatly promote their own interests by forwarding the objects proposed.

From the numerous applications for shares in this company, the committee hereby give notice, that the subscription list will close on the 15th inst., after which the allotment will take place.

Signed, by order of the committee,  
THOMAS MAGUIRE, Provisional Secretary.

Committee Room, 43, Lower Sackville-street.

### SOUTHERN AND WESTERN MINING COMPANY OF IRELAND.

Registered Provisionally, and to be incorporated under Letters Patent from the Queen.

No shareholder liable beyond the amount of his shares.

Capital £200,000, in 10,000 shares, of £20 each.—Deposit £2 per share.

PROVINCIAL COMMITTEE.  
Major N. L. Beames, K.H.F.R.S., Ballinacorney, county of Cork, chairman  
Horatio Townsend, Esq., D.L., Woodside, county of Cork  
Daniel Leahy, Esq., D.L., Shanakill House, county of Cork  
Thomas Somerville Reeves, Esq., J.P., Traamore, county of Cork  
Robert Carr, Esq., merchant, Sidney-place, city of Cork  
John J. Jeffries, Esq., J.P., Greenville House, city of Cork  
Peter Fitzgerald, Esq., Inchbeg, county of Cork  
William K. Rogers, Esq., Grand Parade, city of Cork  
James P. Bell, Esq., Fernoy, county of Cork  
Robert Briscoe, jun., Esq., Fernoy, county of Cork  
Lionel Fleming, Esq., J.P., New-court, county of Cork  
Charles B. Ware, Esq., R.N., County Club, city of Cork  
John Gould, Esq., merchant, Sidney-place, city of Cork  
John Leary, Esq., Shanakill House, county of Cork  
John Carnahan, Esq., Riverstown House, county of Cork  
James Carnegie, Esq., Northside, county of Cork  
James Little, Esq., R.M., Dunmurry, county of Cork

STANDING COUNSEL.—The Recorder of Cork, and S. H. Rogers, Esq., Barrister-at-Law  
SOLICITORS.—T. Jameson, Esq., 4, South Mall, Cork; and J. L. Talbot-street, Dublin  
LONDON SOLICITORS.—Messrs. White, Rees, Humphreys, and White, College-hill, London

SECRETARY.—William Connell, Esq., 80, South Mall, Cork

TREASURER.—The Provincial Bank of Ireland, Cork

In laying before the public a prospectus of the Southern and Western Mining Company of Ireland, the provisional committee feel that no lengthened statement is required to create a full appreciation of the advantages which may be derived from the development of the mineral wealth of the southern and western districts of Ireland, which the most eminent authorities acknowledge to equal, if not exceed, in metalliferous deposits and mineral richness the most favoured mining districts in England.

Independent of the acknowledged abundance of ore, no country in the world presents to the miner greater facilities and advantages for working mines, than those which present themselves in the southern and western portions of Ireland.

It is a well-known fact, that the mines in England, with few exceptions, are from their position incapable of being worked, and are abandoned without the aid of both steam and horse power, either of which occasions at once a large outlay of capital, and entails a heavy annual expense, which cannot be avoided, and yet, notwithstanding these heavy drawbacks, many of the Cornish mines, and those in other parts of England, are paying to the adventurers from £50 to £2000 per cent. on the capital invested. The prices of shares in the Mining Journal fully testify to this fact.

The proximity to the sea of the principal mines in the southern and western districts of Ireland, admits of the ores being shipped and the materials landed without incurring the heavy expense of inland carriage, to which all the mines in England are subject. The elevation of the strata above the sea level varying from twenty to fifty fathoms (and rising on the inland course of the lodes in many instances to 100 fathoms), affords opportunities of working effectively by means of deep levels, and renders quite unnecessary the expensive auxiliaries of either steam or horse power, while the "adits or levels" allow the water to flow off from the mine, and at the same time the ore and waste to be trammed out to the dressing floors.

Under such favourable circumstances, while the mines of the southern and western portion of Ireland are admitted by the most eminent authorities to equal, if not exceed, the most favoured mineral districts in England, and aided, as ours are, by every natural facility for their development, together with a ready and abundant supply of surface water and cheap labour, it is not reasonable to expect that we shall have at least an equal return for the outlay of capital as is yielded by the most prosperous mines in England?

To the landed proprietors in the districts where operations are proposed to be carried on, the undertaking presents advantages that cannot be too highly appreciated. The circulation of capital, the extensive employment, the increased demand for agricultural produce, and the opening up of wild and hitherto unprofitable districts, must necessarily disseminate an extent of property in which the proprietors of the soil will have a full and immediate participation.

It may, perhaps, be said by some parties that mining in Ireland has hitherto been a failure. Several mines have commenced without either experience to guide them, or capital to follow up the undertaking, and hence the failures that may be noted; but where capital has been applied under skilful and experienced mining agents and careful managers, the most marked success has resulted—witness the Berehaven and Crockmahon Mines. The Crockmahon Mines, situated on Skell Harbour, in the west of the county of Cork, commenced work about six years ago, and has during that period sold at Swansea over £17,000 worth of copper ore, while readily being admitted to be equal to a saving of from 50 to 40 per cent. in the working of mines, when compared with those which have not the advantage of similar position.

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### MINING AND RAILWAY OFFICES, 16, CORNHILL.

—Mr. R. TREDINNICK (of Cornwall) having established PRACTICAL AGENTS and CORRESPONDENTS in every MINING DISTRICT, whereby he obtains early and accurate information respecting MINES, proffers his services to capitalists and adventurers in the PURCHASE and DISPOSAL of SHARES.

From the success consequent upon the working of mines both in England and Ireland—many of which yield from 20 to 50 per cent. upon the outlay—Mr. Tredinnick can with confidence recommend investment therein, as being not only highly remunerative, but holding out peculiar inducements at the present time, from the low price at which shares in many can be obtained.

Mr. Tredinnick affords every information, on personal application, gratuitously, and can recommend competent Agents for inspecting and reporting on mines.

### RYE AND THOMAS, MINE AGENTS AND DEALERS

IN STOCKS, RAILWAY AND OTHER SHARES,  
80, OLD BROAD-STREET, LONDON, AND AT LISKEARD, CORNWALL.

### JAMES LANE, SHARE AGENT

HALL OF COMMERCE, LONDON.

### WILLIAM TRENEY, DEALER IN RAILWAY AND MINING SHARES—ESTABLISHED TEN YEARS.

OFFICES, No. 50, THREADNEEDLE-STREET, LONDON.

### WILLIAM FORDYCE, STOCK AND SHARE BROKER

NEWCASTLE-UPON-TYNE.

### HUGHES, COWIE, and CO., METAL BROKERS, have on hand

hand FIG and BAR-IRON of all descriptions and OTHER METALS, and tender their services to Railway Contractors, having a constant supply of RAILS and CHAINS. Fenwick Chambers, Liverpool.

### THOMAS THORBURN and Co., METAL BROKERS,

No. 48, BUCHANAN-STREET, GLASGOW, have always on SALE FIG-IRON, RAILWAY BARS, CHAINS, and BAR-IRON of every description.

### MESSRS. LAMOND, SMALE, and LAMOND'S PUBLIC

SALE OF RAILWAY SHARES, &c., are HELD, at the Hall of Commerce, Threadneedle-street, every TUESDAY and FRIDAY, at One o'clock precisely.—Orders received until Four o'clock of the day prior to sale.—London, Oct. 26, 1845.

### TO RAILWAY SOLICITORS, CLERKS, AND PARTIES

EMPLOYED IN OBTAINING PARTICULARS FOR THE PARLIAMENTARY BOOKS OF REFERENCE.—IMPORTANT.—BOOKS OF REFERENCE.—Now ready, FULL and CORRECT INSTRUCTIONS to get up BOOKS OF REFERENCE. Price 1s. To be had of A. C. Concanen, law, railway, and general stationer, and advertising agent, No. 17, Southampton-buildings, Chancery-lane. Sent per post, on receipt of 1s. in postage stamps.

### TO CAPITALISTS AND MINING AGENTS.—CERTAIN

MINES having been DISCOVERED at COOLCARNAGH, in the County Wexford, Ireland, near Ennisceorthy, applications respecting the property will be received by the Editor of the Mining Journal, at the office, 36, Fleet-street, London.

### WANTED, A MILL, FOR GRINDING IRON ORE.

Address, with full particulars and price, "The Workington Iron Company, Workington, Cumberland."

### TO BE SOLD, A SECOND-HAND CONDENSING

PUMPING-ENGINE, of 130-horse power; also ONE of 300-horse power.—Apply to Mr. George Southwell, Castle Eden.

### MINERS WANTED.—WANTED, FIVE HUNDRED TO

SIX HUNDRED ABLE-BODIED MEN, accustomed to the WORKING OF COAL and IRONSTONE, to whom FIVE SHILLINGS PER DAY, for EIGHT HOURS' WORK, will be guaranteed for at least TWO YEARS, and the expense of removing paid by the proprietors of the works.—Applications in writing (post-paid), stating the age and experience of the applicant, may be addressed to Mr. Robert Watt, 44, Coleman-street, London.

### AMMAN VALE IRON AND COAL COMPANY.—The

directors give Notice, that the DEPOSIT of TWO POUNDS per share upon the shares ALLOTTED in this company, must be PAID to the London and Westminster Bank, or Messrs. Jones and Co., Landowners, South Wales, on or before the 10th day of November inst. By order of the board, J. G. HUGHES, Secretary.

Company's Offices, 35, Moorgate-street, Nov. 5, 1845.

### IRON PIPES.—TO IRONMASTERS, FOUNDERS, AND

OTHERS.—The directors of the COMMERCIAL GAS LIGHT and COKE COMPANY will meet at the office, at the works, Ben Jonson's-fields, Stepney, on Wednesday, the 26th November inst., to RECEIVE TENDERS for ONE THOUSAND and TWENTY-SEVEN of 15-inch CAST-IRON SOCKET PIPES, measuring 3000 yards, and bonds, branches, syphons, &c., as will be specified.—Specifications as to weight, &c., may be seen, and printed forms of tender obtained, from 7 to 300-horse power, at the company's works.—Tenders to be delivered before twelve o'clock on the day above-mentioned. The directors do not bind themselves to accept the lowest tender.

By order of the directors, H. AVERY, Secretary.

Commercial Gas Light and Coke Company's Offices, Stepney, London, Nov. 1, 1845.

### TO ENGINEERS, RAILWAY CONTRACTORS, MINING

AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE for MACHINERY and AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public.

References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

### BY HER MAJESTY'S ROYAL LETTERS PATENT.

### SMART'S ELLIPTICAL CONVEX METALLIC PADDLE



## LONDON SEWAGE COMPANY.

(PROVISIONALLY REGISTERED.)

Capital £1,500,000, in 37,500 shares of £40 each.—Deposit £3 4s. per share.

BANKERS.

Messrs. Williams, Desbon, and Co., Birch Lane.

ENGINEERS.

Thomas Wickstead, Esq., Engineer to the East London, the Grand Junction, the Kent, the Southwark, and Vauxhall Water-Works, in London; and to the Hull and Wolverhampton Water-Works.

ARCHITECTS AND SURVEYORS.

John Dyer, Esq., Aldersgate-street; R. G. Carpenter, Esq., Guildford-street.

CONSULTING CHEMIST.

Arthur Alkin, Esq., F.R.S., F.G.S., &amp;c., Lecturer on Chemistry at Guy's Hospital, and Vice-President of the London Chemical Society.

SOLICITORS.

Messrs. Wood and Blake, No. 8, Falmouth-street, City.

This company, which is possessed of a practicable plan (ready to be deposited, in conformity with the Standing Orders of Parliament, by the 30th inst.) for intercepting every sewer that discharges itself into the Thames, proposes to carry out the contents into the country for agricultural purposes. Thus the pollution of the waters of the Thames being prevented, an improved drainage of the metropolis will be secured, whilst the sewage, applied to agriculture, will yield a very ample return on the capital which is required. Applications for prospectuses or for shares to be addressed, in the usual form, to 4, New London-street, City, Oct. 30, 1845.

ANDREW MARTIN, Secretary.

## SHEFFIELD, ASHTON-UNDER-LYNE, &amp; MANCHESTER RAILWAY.

RAILWAY.—No. 3 QUARTER SHARES.—Notice is hereby given, that the SUBSCRIPTION CONTRACT will lie for SIGNATURE by the shareholders (including the late Barnsley Junction shareholders), from Ten o'clock in the morning to Four o'clock in the afternoon, on the days and at the PLACES following:—

MANCHESTER—From the 1st to the 9th November, at the Company's offices.  
SHEFFIELD—From the 7th to the 16th November, at the company's offices.  
LIVERPOOL—From the 11th to the 19th November, at the Royal Hotel, Dale-st.  
LONDON—From the 13th to the 15th November, at the London Coffee-house.  
BRISTOL—From the 17th to the 18th November, at the Bath Inn.  
BIRMINGHAM—From the 19th to the 20th November, at the Queen's Hotel.  
DERBY—On the 21st November, at the City's Midland Hotel.  
LEEDS—On the 22nd November, at the Scarborough Hotel.  
LANCASTER—On the 24th November, at the King's Arms Hotel.  
EDINBURGH—On the 26th November, at the Crown Hotel.  
GLASGOW—On the 27th November, at the Royal Hotel, George's-square.

This circular, with the banker's receipt for the deposit (except that in the case of the Barnsley Junction shareholders such receipt is not required), must be delivered up at the time of signature, and scrip certificates for the shares will at the same time be issued. No person can sign the deed except the party to whom the allotment was made, or the party claiming under him, by virtue of a letter of renunciation previously lodged and accepted at this office.

JOHN PLATTARD, Secretary.

London-road Offices, Manchester, 1st November, 1845.

## COLCHESTER AND CAMBRIDGE DIRECT RAILWAY.

(PROVISIONALLY REGISTERED.)

Capital £550,000, in 27,500 shares of £20 each.—Deposit £2 5s. per share.

Liability limited to amount of shares.

COMMITTEE OF MANAGEMENT.

Edwin Leat, Esq.,  
J. A. Lyard, Esq.,  
James Matthias Gilchrist, Esq.,  
John Angus Walmsley, Esq.,  
Ellis Treacher Bowden, Esq.,  
William Pyne, Esq.,  
J. M. Levy, Esq.,  
Edward Shirley Kennedy, Esq.,  
John Lovell Lawton, Esq.,  
Captain A. H. Earle, R.A.

BANKERS.

London—Messrs. Cocks, Biddulph, and Co., Charing-cross.

The Commercial Bank of London.

Colchester—Messrs. Round, Green, and Co.

ENGINEERS—Edward Bell, Esq., C.E.; Richard Bell, Esq.

PARLIAMENTARY AGENTS—Messrs. Jones and Walmsley, 40, Parliament-street.

SOLICITORS AND SECRETARIES.

Messrs. Bowden and Son, 65, Aldermanbury.

John R. L. Walmsley, Esq., 12, North-street, Westminster.

LOCAL AGENTS.

Colchester—William Salmon Cooper, Esq.

Haleford—Messrs. Spurling and Harris.

Sible Hedingham—Richard Thompson, Esq.

Cambridge—Charles H. Cooper, Esq.

## COLCHESTER AND CAMBRIDGE DIRECT RAILWAY.

Notice is hereby given, that NO FURTHER APPLICATIONS FOR SHARES in this company can be received after SATURDAY NEXT, the 8th inst.

By order,

BOWDEN AND SON, Solicitors.

JOHN R. L. WALMSLEY, Esq.

## HEREFORD AND MERTHYR TYDVIL RAILWAY COMPANY, IN CONNECTION WITH THE GLOUCESTER, ABERYSTWITHE, AND CENTRAL WALES RAILWAY.

CHAIRMAN—Hon. F. H. F. BERKELEY, Member for Bristol.

DEPUTY-CHAIRMAN—T. F. MATTIAND, Esq.

The Most Noble the Marquis of Clanricarde  
The Right Hon. the Lord Southampton  
Captain the Hon. F. Berkeley, C.B., and  
Member for Gloucester  
The Hon. Granville Berkeley, Member for  
Gloucestershire  
Sir William Magnus  
Mr. Ald. Humphrey, Member for Southwark  
Sir G. E. Anderson  
The Hon. A. Capel  
Colonel Powell Hewitt

The letters of allotment in this company are now issued. The committee have not been able to comply with the wishes of applicants to the extent they would have desired, but in the allotment every practical attention has been paid to the shareholders in the Gloucester, Aberystwith, and Central Wales Railway Company.

The committee of management cannot too strongly express their satisfaction at the amalgamation that has taken place between this company in connection with the Gloucester, Aberystwith, and Central Wales Railway, and the Great Western Railway Company.

By order,

T. HAWKER, Secretary.

Office, 1, New Broad-street, Nov. 5, 1845.

## PONTEFRAC, DONCASTER, WORKSOP, AND MANSFIELD JUNCTION RAILWAY.

No. 1, ROYAL EXCHANGE-BUILDINGS, LONDON.

The committee of management of this railway beg to give notice to the subscribers and the public, that the issue of the ALLOTMENT OF SHARES, in answer to the very numerous applications, was CLOSED on SATURDAY LAST.—The committee have great satisfaction in stating that the survey of the line is now complete, and that the whole of the details connected with the engineer's department will be ready in ample time to comply with the Standing Orders of both Houses of Parliament; and with a line of such obvious merit and utility, it is with the utmost confidence that they look forward to the result of their application to the Legislature.—Nov. 8. J. N. SPELLING, Secretary.

## PATENT ELASTIC PAVEMENT, AND KAMPTULICON COMPANY.—ESTABLISHED 1842.

OFFICES, 42, LOMBARD-STREET.—FACTORY, GREENWICH-ROAD.

Capital £50,000.

To be raised by the issue of Five Series of 10,000 shares, of £1 each, paid in full, bearing 5 per cent. per annum interest.

ISSUE OF SECOND SERIES.

The holders of the first series being entitled by the rules and regulations of the company to a preference in the remaining series, Notice is hereby given, that applications from the holders of the first series, stating the number of shares held by them, and claiming such preference, will be received at the company's offices until the 23rd November next; after which date, those shares will be disposed of to the public at £1 per share premium, and for which applications in the following form may be made to the secretary:—

To the Committee of Management of the Patent Elastic Pavement and Kamptulicon Co.,  
Gentlemen,—I request that you will allot me shares, of the Second Series, of £1 each, in the above company; and I undertake to accept the same, or any smaller number that may be allotted me, and pay the said sum, £2 per share, when required.

By order of the board,

FENISTON GROSVENOR GREVILLE, Secretary.

## LEICESTER AND BIRMINGHAM RAILWAY, WITH A BRANCH FROM NUNEATON TO COVENTRY.—(BAXTER'S LINE).

(Registered 16th April, 1845.)

The committee of management have the satisfaction of laying before the shareholders in this undertaking a copy of a communication received from their engineer, Charles Vignoles, Esq., and addressed to the secretary, on the subject of depositing the plans and sections. The committee can also, with confidence, state that every other requirement will be strictly complied with, and that they, in conjunction with powerful existing interests, have the fullest confidence of being able to lay before Parliament such a scheme as will insure success to this undertaking:—

4, Trafalgar-square, Oct. 29, 1845.  
Sir,—I have the satisfaction of reporting to you, for the guidance of the board, that the progress made in the Parliamentary surveys for the Leicester and Birmingham Railway is such, that I am now able to assure you that the whole of the necessary plans and sections will be completed in good time for lodgment on the 29th November.

I am, Sir, your faithful servant,

CHARLES VIGNOLES, Engineer.

Edward Daniel, Secretary to Leicester and Birmingham Railway.  
By order, EDWARD DANIEL, Secretary.

## OXFORD AND SALISBURY DIRECT RAILWAY, VIA ABINGDON, WANTAGE, HUNGERFORD, AND LUDGERSHALL.

At a MEETING of the INHABITANTS of WANTAGE and the neighbourhood, convened by public notice, and held in the Town Hall on Wednesday, the 5th November inst.,  
THOMAS GOODLAKE, Esq., of Letcombe Regis, Magistrate for the County of Berks, in the chair.

It was moved by Mr. Henry Palmer, of Wantage, seconded by Mr. William Ormond, of Wantage, and carried almost unanimously,  
That in the opinion of this meeting, the Oxford and Salisbury Direct Railway, passing through the town of Wantage, will be highly beneficial to this town, and is entitled to the support of the inhabitants.

It was moved by T. Dowdall, Esq., chairman of the committee of management, seconded by Lieut.-Col. Hodgson, a member of that committee, and carried unanimously,  
That the thanks of the meeting be given to Thomas Goodlake, Esq., for his courteous and able conduct in the chair.

And on the motion of the Chairman, seconded by Mr. Henry Palmer, the thanks of the meeting were unanimously voted to William Ormond, Esq., the local agent for the company, for the exertions which he had made in support of the undertaking, and for having convened this meeting.

THOMAS GOODLAKE, Chairman.

## FALMOUTH, HELSTON, AND PENZANCE RAILWAY.

(Provisionally Registered.)

Capital £250,000, in 25,000 shares of £10 each.—Deposit, £1 2s. 6d. per share.

PROVISIONAL COMMITTEE.

Captain James Anson, Plymouth, director of the Cheltenham, Oxford, and London Junction Railway.

Abraham Bettridge, Esq., No. 4, Devonshire-terrace, Camden-road, director of the Great Grimsby and Midland Junction Railway  
Thomas Carlisle, Esq., 6, Park-place West, Hyde Park, and Clifton, Bristol, director of the Direct Western Railway  
George Borlase Childs, Esq., 54, Fore-street, London  
James CHIEF, Esq., 30, Bloomsbury-square, director of the Paris and Strasburg, Rugby and Macclesfield, and Cheltenham and Brighton Railways  
Joseph Clowes, Esq., 9, Grosvenor-street, managing director of the British and Foreign Gas and Meter Company

Edward William Cox, Esq., 1, Torrington-square, director of the Direct Bristol and Exeter, and Middlesex and Surrey Junction Railways  
Anthony William Clarke, Esq., director of the London and Hounslow Railway, and Staines and Farnborough Railway  
John Campbell Dicker, Esq., New Hall, Neston, Cheshire, director of the Birkenhead and Holyhead Railway

E. Deubelberg, Esq., F.R.S. Great Surrey-street, London, director of the Rugby, Warwick, and Worcester, and Thames Valley Railways  
William Eccles, Esq., Old Broad-street, London, director of the Great Grimsby and Midland Junction Railway  
Robert Fisher, Esq., Highbury Park, director of the Lincolnshire and Eastern Counties Junction, and of the Liverpool, Preston, and North Union Railways

Edward Goddard, Esq., Stonehouse, Newbury, Berks  
C. H. Rogers Harrison, Esq., director of Grand Trunk, and Hull and Holyhead Railways  
Samuel Haydon, Esq., Mount Radford, Exeter  
Edmund Haynes, Esq., Summerland-place, Exeter  
William Kennaway, Esq., the Barnfield, Exeter

Lavonius Kortright, Esq., director of the Barbadoes Railway  
James Lawford, Esq., Holmfild Lodge, Exeter  
Caleb Norris, Esq., Lancaster-place, Strand, director of the Exeter, Dorchester, and Weymouth, and the Windsor, Slough, and Staines Railways  
George Pell, Esq., Welford and Northampton  
Louis Raine, Esq., Bury St. Edmund's, Suffolk

J. Evans Radore, Esq., M.D. Harley-street, Cavendish-square  
J. Reeves, Esq., Leyton, Essex, director of the Great Manchester, Rugby, and Southampton Railway  
Richard Richards, Esq., Chudleigh, Devon

J. C. Ridgway, Esq., Keshington Lodge, Putney, Surrey  
Reginald Read, Esq., director of the Tunbridge and Hastings, and Brighton Railways  
William Wilson, Esq., M.D. Devonport-street, Sussex-square, Hyde Park, London, director of the Great Grimsby and Midland Junction Railway

PROVISIONAL COMMITTEE FOR FALMOUTH.

Messrs. W. J. Clarke, draper, councillor of the borough of Falmouth  
T. F. Dixon, stationer  
James Hill, gentleman  
J. Oliver, jun. builder  
R. Osler, merchant  
E. Read, draper  
T. Rogers, draper, councillor of the borough of Falmouth  
W. Selley, hotel keeper  
J. Trethowan, shipbuilder

PROVISIONAL COMMITTEE FOR PENRYN.

Messrs. Jos. Brokenshire, merchant, mayor of Penryn  
James Blamey, merchant  
William Corfield, merchant  
Samuel Dunstan, merchant  
William Edgcombe, gentleman  
William B. Hicks, merchant  
James Mead, merchant  
John Powell, hotel keeper, alderman of Penryn  
J. Bird Road, merchant, alderman of Penryn  
Henry Rowe, gentleman, Trevellick  
Richard Sowell, merchant  
John Steel, gentleman  
Sampson Stevens, merchant  
Alexander Teague, merchant  
Thomas Grey Trevellick, merchant

PROVISIONAL COMMITTEE FOR HELSTON.

Messrs. James Caddy, draper  
William Caddy, draper  
Edward Dingley, hotel keeper  
T. H. Edwards, conveyancer, councillor of the borough of Helston  
J. C. Harry, merchant  
Thomas Julian, merchant and shipowner  
George Lanyon, merchant, councillor of the borough of Helston  
William Penberthy, architect, councillor of the borough of Helston  
William Penberthy, jun. architect  
Arundel Rogers, solicitor, clerk of the peace for the borough of Helston  
William Smeaton, spirit merchant  
John Score, agent, auditor of the borough of Helston  
William Woolcock, merchant

PROVISIONAL COMMITTEE FOR PENZANCE.

Messrs. Thomas Conlon, merchant, Penzance  
Michael Culiver, merchant, Penzance  
John Coulson, merchant, Penzance  
Samuel Higgs, jun. merchant, Penzance  
James Pentreath, merchant, Penzance  
John Prockier, chemist, Penzance  
Edward Rose, printer, Penzance

ENGINEERS.

George Howard Feilwick, Esq., C.E. London.—Joseph Oliver, Esq., C.E. Falmouth  
Henry Flower, Esq., 39, Regent-square, and 18, Barge-yard Chambers, Bucklersbury  
Surveyors—Thomas Best, Esq., London

SOLICITORS.

Thomas Harvey, Esq., 68, Old Broad-street, London.—Samuel Bamfield, Esq., Falmouth  
LOCAL AGENTS.  
Falmouth and Penryn—R. Rimell, Esq.  
Helston—Thomas Rogers, Esq.  
St. Ives—H. Bamfield, Esq.  
Penzance—Messrs. Millett and Borlase

BANKERS.

Penzance—Messrs. Batten, Carne, and Carne  
Prospectuses and forms of application may be had of the solicitors; and applications for shares must be addressed to the provisional committee, at the offices of the company, 68, Old Broad-street, London.

FORM OF APPLICATION FOR SHARES.

To the provisional committee of management of the Falmouth, Helston, and Penzance, Railway Company.  
Gentlemen,—I request you will allot me shares of £10 each in the above railway, and I undertake to accept the same, or any less number you may appropriate to me, subject to the regulations of the company, and to sign the Parliamentary contract and subscribers' agreement, and, when required, to pay the deposit of £1 2s. 6d. per share.

Name in full .....  
Profession or business (if any) .....  
Residence .....  
Place of business .....  
Reference .....  
Date .....

## FALMOUTH, HELSTON, AND PENZANCE RAILWAY.

The Provisional Committee of this undertaking beg to announce that the survey of the line is proceeding most satisfactorily, and that the plans and sections will be duly deposited with the proper authorities within the time limited, and that all the necessary steps have been taken preparatory to an application to Parliament in the ensuing session for an Act to authorise the construction of the said railway.

THOMAS HARVEY,  
SAMUEL BAMFIELD, } Solicitors.  
68, Old Broad-street, London, November 3, 1844.

## FALMOUTH, HELSTON, AND PENZANCE RAILWAY.

At a MEETING of the INHABITANTS of FALMOUTH, held at Selley's Hotel, the 28th of October, 1845.

RICHARD OSLER, Esq. in the chair.  
It was unanimously resolved, That a line of railway, which shall connect the towns of Penzance, Helston, Penryn, and Falmouth, by the shortest route, and in the direction of the present line of traffic between these places, would be of great local and commercial importance, as tending to afford the readiest means of transit for the mineral and agricultural produce of the intermediate localities, and facilitating communication between places of so much relative importance, and would also greatly benefit the trade and port of Falmouth.

That the line of railway, the particulars of which have been laid before this meeting, called the Falmouth, Helston, and Penzance Railway, is calculated to effect these objects, and that this meeting pledges itself to give the said undertaking its most cordial and strenuous support.

That the names of the following gentlemen be placed on the provisional committee:—  
PROVISIONAL COMMITTEE FOR FALMOUTH.  
Messrs. W. J. Clarke, draper, councillor of the borough of Falmouth  
R. Osler, merchant  
T. Rogers, draper, councillor of the borough of Falmouth  
James Hill, gentleman  
E. Read, draper  
J. Oliver, jun. builder  
T. P. Dickson, stationer  
J. Trethowan, shipbuilder  
W. Selley, hotel-keeper

## FALMOUTH, HELSTON, AND PENZANCE RAILWAY.

At a MEETING of MERCHANTS and others of PENRYN, held at the King's Arms, on Wednesday, the 28th of October, 1845.

JOSEPH BROKENSHERE, Esq. mayor, in the chair.  
It was unanimously resolved, That the trade of Penryn would be materially benefited by the construction of a railroad from the towns of Penzance and Helston, continued to the usual place for the shipment of granite and other merchandise in the said borough; also, by obtaining greater facilities for the transmission of mining supplies and other commodities into the interior of the southern district between Penryn and Penzance; and this meeting regards the promotion of such an undertaking with feelings of the liveliest interest.

That the Falmouth, Helston, and Penzance Railway, being the only line projected for supplying accommodation to the country between those places, and fully meeting the requirements of the district through which it passes, is, therefore, entitled to the cordial approbation and support of the inhabitants of this town and neighbourhood; and this meeting pledges itself to promote the said undertaking by the most united and persevering efforts.

That the names of the following gentlemen be placed on the provisional committee, and that they be the committee for Penryn and its neighbourhood:—  
Messrs. Jos. Brokenshire, merchant, mayor of Penryn  
James Blamey, merchant

## FALMOUTH, HELSTON, AND PENZANCE RAILWAY.

At a MEETING of the INHABITANTS of HELSTON, held at the Star Inn, on Monday, October 27, 1845.

THOMAS ROGERS, Esq. in the chair.  
The following resolutions were unanimously adopted:—  
Moved by John Kendall, Jun. Esq.; seconded by William Penberthy, Esq.:  
That railways having become the principal means of communication between most of the important towns and districts of the country, it is essential that the large mining and agricultural population of the southern district, from Falmouth to Penzance, should enjoy the advantages possessed by, or offered to, other portions of the kingdom. This meeting, therefore, regards the promotion of such an undertaking as an object of vital importance to the inhabitants of Helston and the neighbourhood.

The promoters of a line of railway, called the Falmouth, Helston, and Penzance Railway, having laid their plans before the meeting for carrying the said railway from Falmouth to Penryn, containing, Gweek, Helston, Sithney, and Marazion to Penzance, it was resolved, That the said line fully meets the requirements of this town and neighbourhood, and the whole of the southern district of the county traversed by it, and this meeting pledges itself to give the said undertaking its undivided and energetic support.

Moved by William Sleeman, Esq.; seconded by T. H. Edwards, Esq.:  
That the names of the following gentlemen be placed on the provisional committee, and that they be the committee for Helston and its neighbourhood:—

PROVISIONAL COMMITTEE FOR HELSTON.  
Messrs. James Clark, wine merchant, councillor of the borough of Helston  
William Caddy, draper  
Edward Dingley, hotel-keeper  
T. H. Edwards, conveyancer, councillor of the borough of Helston  
J. C. Harry, merchant  
Thomas Julian, merchant and shipowner  
John Kendall, Jun. gentleman, councillor of the borough of Helston  
George Lanyon, merchant, councillor of the borough of Helston  
William Penberthy, architect, councillor of the borough of Helston  
William Penberthy, jun. architect  
Arundel Rogers, solicitor, clerk of the peace for the borough of Helston  
William Smeaton, spirit merchant  
John Score, agent, auditor of the borough of Helston  
William Woolcock, merchant

## PLYMOUTH AND NORTH CORNWALL RAILWAY.

The provisional committee of this company have the satisfaction to announce, that having secured the interest of the "Delabole and Rock Railway Company," they have now concluded an arrangement for the amalgamation of the "Plymouth and North Cornwall Railway Company," with the "Cornwall and Devon Central Railway Company," in conjunction with other associated companies, which are now about to be amalgamated with that company, in one continuous line from Falmouth and Penzance to London.—An amended prospectus, in pursuance of the said arrangements, will be published in a few days.—In the meantime, applications for shares should be addressed to the secretary, at the offices of the company, 15, Basinghall-street, London; Messrs. Bull and Underwood, 25, Ely-place, London; Messrs. Woolcombe, Square, Stevens, and France, Plymouth; Mr. Henry Darke, Lanreath and Tavistock; Messrs. Shewell and Son, stockbrokers, 25, Tokenhouse-yard, London; Messrs. W. H. Collis and Smith, New-street, Birmingham; Messrs. Farnham and Worthington, Old Hall-street, Liverpool; Messrs. Cardwell and Sons, Manchester; Mr. Luke Arnold, Bristol; Mr. James Higgs, Gloucester; Mr. J. Stokes, Cheltenham; and Messrs. Henry Beaumont and Co., Exeter.

BOSTON, STAMFORD, AND BIRMINGHAM RAILWAY, WITH A BRANCH TO LYNN (BAXTER'S LINE).  
(Provisionally Registered 17th April, 1845.)  
The committee of management have the satisfaction of laying before the shareholders in this undertaking a copy of a communication received from their engineer, Charles Vignoles, Esq., and addressed to the secretary, on the subject of depositing the plans and sections. The committee can also, with confidence, state that every other requirement will be strictly complied with, and that they, in conjunction with powerful existing interests, have the fullest confidence of being able to lay before Parliament such a scheme as will insure success to this undertaking:—

4, Trafalgar-square, London, October 29, 1845.  
Sir,—I have the satisfaction of reporting to you, for the guidance of the board, that the progress made in the Parliamentary surveys for the Boston, Stamford, and Birmingham Railway is such, that I am now able to assure you that the whole of the necessary plans and sections will be completed in good time for lodgment on the 29th November.

I am, Sir, your faithful servant,  
To Edward Daniel, Esq. Secretary to the Boston, Stamford, and Birmingham Railway.  
By order, EDWARD DANIEL, Secretary.

## LYME REGIS AND TAUNTON RAILWAY, AND LYME REGIS HARBOUR IMPROVEMENT COMPANY.

CONNECTING, BY A DIRECT LINE, THE ENGLISH AND BRISTOL CHANNELS.  
(Provisionally Registered, pursuant to 7 and 8 Vic., cap. 110.)

Capital £200,000, in 40,000 shares, of £5 each.—Deposit £2 2s. per share.  
The committee of management of the above company have determined to require from the parties to whom shares may be allotted the immediate payment of a deposit of 2s. per share only, being the amount allowed by the Act of Parliament to be taken beyond the amount required by the standing orders, to be deposited in the name of the Accountant-General of the Court of Chancery. The remaining deposit of £2 per share will not be required before the month of January, and will not then be required unless the company are in a position to proceed to Parliament in the ensuing session, which they are confident of being able to do.—No application for shares will be received after the 10th instant from parties residing in London, nor after the 13th instant from parties residing in the country. Prospectuses may be obtained at the offices of the Company, No. 23, Finsbury-place North, London.

## LONDON &amp; NORTHAMPTON DIRECT ATMOSPHERIC RAILWAY COMPANY.

(Provisionally Registered, 16th of October, 1845.)  
Capital £1,000,000, in shares £20 each.—Deposit £3 2s.  
FELIMINARY ANNOUNCEMENT.  
This line is projected to afford the large and populous towns of Barnet, Saint Albans, Dunstable, Woburn, and Newport Pagnell, direct railway communication with the metropolis and Northampton; and also, by means of the existing and proposed lines, with the mineral and manufacturing districts of the northern and midland counties, of which they are now entirely destitute. By adopting the atmospheric principle the company propose to make their line chiefly on part of the existing tramway road (leaving the remainder for the present road traffic, and screening it from the railway to prevent the trains from frightening horses). Should the company, as able as they expect, to traverse all the houses of the line with a single line of rails, the railway will be made cheaper than any other in the kingdom. The project has already received distinguished and general support. A prospectus, with the names of a wealthy and influential committee, will be published shortly.

Applications for information or shares may be made in the meantime to Messrs. Chamberlayne and Meaden, solicitors, 31, Great James-street, Bedford-row, London; and John Pearce, Esq. solicitor, Dunstable.

## UNDER THE PATRONAGE OF ROYALTY AND THE AUTHORITY OF THE FACULTY.

KEATING'S COUGH LOZENGES.—A remedy for all disorders of the pulmonary organs—in difficulty of breathing—in redundancy of phlegm—in incipient consumption (of which cough is the most positive indication) they are of unerring efficacy. In asthma, and in winter cough, they have been seldom known to fail.—KEATING'S COUGH LOZENGES are free from every deleterious ingredient; they may, therefore, be taken at all times, by the most delicate female and by the youngest child; while the public speaker and the professional singer will find them invaluable in allaying the hoarseness and irritation incidental in vocal exertion, and consequently a powerful auxiliary in the production of melodious enunciation.

Prepared and sold in boxes, 1s. 1d., and tins 2s. 9d., 4s. 6d., and 10s. 6d. each.  
Thomas Keating, chemist, &c. No. 79, St. Paul's Churchyard, London.  
Sold by Sanger, 150, and Dietrichsen and Hannay, 63, Oxford-street; Blake, Stanford, and Blake, 47, Piccadilly.—Sold wholesale by Barclay and Sons, 95, Basinghall-street; Edwards, 67, and Newberry, 45, St. Paul's Churchyard; Sinton and Co., Bow Church-yard; and retail by all druggists and patent medicine vendors in the kingdom.

Just published, a new and important Edition, price 2s. 6d.; free by post, 3s. 6d.  
THE SILENT FRIEND: a medical work, on Human Frailty, Nervous Debility, constitutional weakness, excessive indulgence, &c.; with Observations on Marriage, &c. By R. and L. PERRY and Co., surgeons, London. Published by the authors, and sold at their residence; also by Strang, 21, Paternoster-row; Hannay and Co., 63, Oxford-street; Noble, 109, Chancery-lane; Jordan, 146, Ludenall-street; Purkiss, Compton-street, Soho, London.

THE CORDIAL BALM OF SYRIACUM is a stimulant and renovator in all spasmodic complaints. Nervous debility, indigestion, asthma, and consumption, are gradually and imperceptibly removed by its use, and the whole system restored to a healthy state of organization. Sold in bottles, price 11s. and 33s.

THE CONCENTRATED DETENSIVE ESSENCE.—An anti-phlogistic remedy for searching out and purifying the blood from venereal contamination, scurvy, blotches on the head, face, and body, ulcerations, and those painful affections arising from improper treatment, or the effects of mercury, removing secondary symptoms, and all eruptions of the skin. Price 11s. and 33s. per bottle; also 45s. cases.

PERRY'S PURIFYING SPECIFIC PILLS have long been used as the most certain remedy for scorbutic complaints of every description. Scrophulous eruptions of the skin, pimples on the face, and



# **PLYMOUTH, DEVONPORT, AND STONEHOUSE DOCKS AND EMBARKMENTS COMPANY.**

(PROVISIONALLY REGISTERED.)

Capital, £500,000, in £25 shares.

Interest at 4 per cent. during the progress of the works.

A list of the provisional committee will appear in a future publication.

The object of the promoters of this truly national company is to give facilities to trade, and to secure one of the most permanent and safe investments for capital. To the British and foreign merchant it offers the extraordinary advantage of loading and unloading cargoes of every kind, without one penny charge for the same; or, in other words, it saves that which is now paid, and at an avoidance of the most riskable and dangerous part of the navigation of the longest voyages, those, too, of the average of 300 miles, namely, the British Channel, as between London and Plymouth; the Irish Channel, as between Liverpool and the Land's End; and the Bristol Channel, as between Bristol and the Land's End.

To subvert the loss of life and cargo in the British Channel would be to tell a tale of the Goodwin and the rocks of Boulogne, or recall to our memories the names of the *Amphitrite*, the *Belshazzar*, and the *Conqueror*. To particularise the number of lives sacrificed, and the loss of property by shipwreck in the Irish Channel, would be a work of supererogation, whilst it is remembered that Carnarvon, Cardigan, and Carnarvon Bays exist; or to rehearse here what the *Mariner's Chronicle* has so forcibly said before of the losses in the Bristol Channel and north coast of Cornwall, would be to make us feel the agony which the names of Padstow, St. Ives, and Falmouth only produce.

The freight from London to Plymouth is 25s. to 30s. per ton of forty feet.

All vessels going long voyages would be 20s. less per ton if shipped at Plymouth than if shipped at London, except upon such articles as stone, iron, and coal; the two former of which are often taken as ground tier at a loss.

The insurance is 20s. per cent. in summer, to 30s. or 40s. in winter, from London to Plymouth, and the insurance upon long voyages would be 20s. less, if the vessels loaded and sailed from Plymouth.

Now, the distance between London and Plymouth by land is 216 miles, and as coals and other articles are now carried by rail, at 1d. per ton per mile, the cost of goods would be increased 18s. per ton. Here, then, we have at least a saving of 2s. per ton, and the whole of the insurance; therefore, the merchant would actually ship his goods for nothing, and find cash in his pocket, seeing that the price he pays at present for insurance would more than cover the charge of carriage by rail. Then, again, look at the advantage he would have in time. A steamer takes from three to six days loading in London, and delivering her cargo at Plymouth. An American liner, or an East or West Indian, would average a fortnight at least before the Edystone Light or Plymouth is made; but by the rail, the goods may be delivered in twelve hours—the articles all kept dry, and in good condition, not damaged by the mud of the wharves, the leakage of oil barges and ships, or the inconvenient storage or pressure in the hold of a ship. But the promoters of this undertaking go further, and they say, "Are we to be at peace for ever?" If a war breaks out, where could be found the merchant who would be rash enough to let his ship, richly laden, to or from the East or West Indies, run the gauntlet of the British Channel, studded, as it will be, with armed squadrons of the enemy? In time of former wars, ships with letters of marque, corsair, and various craft of the enemy, might be surprised in a calm and taken; but where is the chance, in a case of war, of an enemy's steamer being taken, seeing that it seldom happens that one vessel steams a mile an hour faster than another?

The promoters believe Plymouth and Devonport are destined to become, with their 100 miles of river margins, the Custom House of England for everything west, when the railroads are carried out. They have the satisfaction of witnessing the progression of three lines—viz., the Great Western, the South-Western, and the Direct Western, and hence they will be enabled to put the directors in these three competing lines into competition with each other, and thereby secure the Dock Company the cheapest mode of conveyance. In fact, they have full confidence that in a short time all merchandise will be delivered, either from Liverpool or London to Plymouth, at the small charge of 4d. per ton per mile. The promoters are fully aware of that which is about to be done by two other dock companies in other directions; but so far from having any jealous feeling upon the subject, they rejoice and express a hope that other and more influential companies will be enabled to do the same.

Two miles and a half of river margin abutting upon the three towns, on which quays and warehouses can be built, in Stonehouse Creek. This is the central place to which Nature points out with her unerring finger to the reflecting portion of mankind, and says—"here you must begin if you are wise." The salvation of England depends upon the energy of its inhabitants; your old naval tactics will not avail in the coming day. Be prepared for a different state of things. The invention of steam has altered every feature of past experience as applicable to the future, and hence the consequences. If you will retain the East and West Indies, if you still hold to your motto—"Ships, Colonies, and Commerce," you must be prepared to meet the nearest port of call, the Cape of Good Hope. You must be rendered available for your trade; and none has a higher claim upon the merchant and the capitalist than the magnificent port of Plymouth, which Mr. Dupin, in 1829, declared to be the finest he had ever seen.

The promoters do not believe that in this preliminary notice a statistical account of profits is necessary. It is sufficient to point out that large sources of revenue are open to the subscribers in the shape of wharfage dues, warehouse rents, tolls, and charges, which ordinarily remunerate the large Metropolitan and Liverpool Dock Companies, all of which are good investments. Remember the average number of British ships wrecked in a year is 600, the value of property destroyed two millions and a half, and the number of lives lost is 1500.

Applications for shares to be made to the joint secretaries (pro tem.), Richard Burnett and Boyd Burnett, at the company's office, 9, Piazza, Covent-garden; or to Mr. Wm. Greenham, Castle-street, Holborn, Messrs. Gragg and Jones, Bedford-row, Messrs. Husband and Wyatt, 11, Gray's Inn, solicitors to the company.

Architects—Messrs. Scott and Moffatt, Spring-gardens.

BANKERS—Messrs. Cocks, Biddulph, and Co., London.

The promoters of the Plymouth, Devonport, and Stonehouse Dock and Embarkments Company, intend to apply to Parliament to empower the said company to purchase and take possession of the whole of Stonehouse Creek, in Devonshire, up to high water mark, and of such lands, buildings, wharves, quays, bridges, &c., as shall be within 100 yards from the margin of the creek. In addition to those powers, it is intended to include the power of purchasing and taking possession of the whole of the "Five Fields," or such part or parts thereof, as may be deemed necessary to join the terminus of the Great Western Railway at Eldon, in the parish of St. Andrew, Plymouth. It is further intended to take the power of purchasing and taking possession of all the buildings, wharves, and quays, lying and being between Hockin's building-yard in front, and the line rocks at the back, under West Emma-place, sweeping away either in a direct or curved line all the warehouses, stores, or buildings, from Hockin's yard inclusive to the foot of the Stonehouse-bridge, in which line will be included nearly the whole of West-street, in the parish of East Stonehouse. It is also intended to take the power of purchasing the houses, stores, warehouses, and quays, commencing and including Baker's place, and the quay, called Hicke's, on the Devonport Water Company's quay, in the parish of Stoke Damerel.

And the said company intend to take the power of purchasing the Mill-house and Mill-bridge, and of improving or erecting a more commodious and more elevated structure in its stead. The said company also intend to take the power of purchasing Stonehouse-bridge, or entering into terms, to be mutually agreed upon, by and with consent of the present owners, Lord Mount Edgemoune, and the trustees of Sir John St. Aubyn to alter and improve the said bridge.

And the said Plymouth, Devonport, and Stonehouse Dock and Embarkments Company, intend to take the power to excavate the said creek and lands, build sea walls, drive piles, make landing and shipping wharves, and piers, erect and set up gates to wet or tidal docks, and to all other acts which are usual upon such occasions.

The whole of the aforesaid Stonehouse-creek abuts upon together with the lands, buildings, and wharves, and are in the parishes of St. Andrew, within the borough of Plymouth, and the parishes of East Stonehouse and Stoke Damerel, within the borough of Devonport.

RICHARD & BOYD BURNETT, Secretaries.

WEST-END RAILWAY AND MINING INSTITUTE.—We have been favoured with an early copy of a preliminary prospectus, prepared by some scientific gentlemen, with the view of establishing an institution at the west end of London, for the collection and promulgation of information respecting railways, mines, &c., and to co-operate with the several public places of meeting in the city, existing and projected. It is proposed to purchase the Adelaide Gallery, and to perfectly remodel it, for this purpose, where every information which can be obtained regarding foreign mines and railways will be registered, and it is expected by the proprietors that all the great railway and mining interests will anxiously co-operate in carrying out so important an institution. The premises are admirably adapted for the purpose, by their proximity to the Houses of Parliament, and the great thoroughfare of the Strand, and, to facilitate immediate intercourse with the city, the promoters are already in communication with the National Electric Telegraph Company, who, fully coinciding in their views, the establishment will be connected either with a branch in the city, or with the proposed Railway Exchange, by this instantaneous means of communication. The great hall of the Adelaide Gallery will have a floor thrown over on a level with the lower gallery, forming a capacious and splendid room, the use of which the proprietors reserve to themselves for three days in the week; the remaining three days it will be open for public meetings, scientific lectures, &c., when the top gallery will be appropriated to ladies, or select parties; the other parts of the premises will be devoted to works for exhibitions, models, &c., illustrative of scientific inventions and research. Mr. Wyld, of Charing-cross, will contribute his valuable aid in the map and other departments. An extensive library of valuable scientific works will be gradually collected, and all the scientific periodicals and papers of the day will be kept on the tables for inspection. We hail the proposed establishment as a most desirable one, and which must prove of much benefit to the railway world, particularly to capitalists at the west end of the town, as every information will thus be obtainable with greater facility than at present, even in the city, without considerable trouble, and the institution will form a depot for the reception and dissemination of every novelty, and every improvement in the wide field of science, particularly as regards mines and railways.

TOTNES DUCKFARTLEIGH, AND ASHBURTON RAILWAY.—We understand that between 4000 and 5000 shares have been applied for, more than will be required for the undertaking, and, as will be seen by an advertisement, the letters of allotment have been posted, so that many applicants must be disappointed. T. Michelmores, Esq. (of Berry House, steward and agent of the Duke of Somerset), has been elected chairman of the committee of management, and C. Webber, Esq., J.P. (of Winsland House, Totnes), vice-chairman. This necessary and important line will not meet with any opposition, and will form a considerable feeder and branch to any direct line which the Government may sanction. The engineer, R. Dymond, Esq., is proceeding fast with the survey, in order to go to Parliament early next session.

## **REFINING OF GOLD BY MEANS OF CEMENTATION.**

The process of refining gold by the dry method, or by operation of cementation, has been known for a long time, although it has been considered sometimes as a secret, and that it has only been employed by a very small number of refiners for purifying alloyed gold, and particularly that from which they wish to extract all other substances which injure its ductility. Several attempts have been made for completely refining gold by means of cementation; but on one side they experienced very great loss of metal, and, on the other hand, they could not obtain it sufficiently pure, for which reason they have resorted to the old system. Dr. Philippe observes that he has made numerous experiments, which convince him that it is possible to obtain gold in its purest state, such as that which is sold by the trade under the name of fine gold, and even finer, by means of cementation, and that the success of this operation only depends on the manner in which it is worked. 1. In the choice of the proper materials for cementation. 2. In the preparation of the whole. 3. The alloy to be given. 4. The temperature or heat employed.—The following are the details relative to each of these conditions:—

1. *Materials suitable to compose the Mass for Cementation.*—A great many receipts exist on this subject; therefore if there are 16 grammes (dwts.) of gold to refine, the following is adopted:—100 grammes of fine powdered brick-dust, 32 ditto sulphate of iron, 8 ditto alum, 32 ditto sea-salt, 16 ditto saltpetre, and 8 ditto sal ammoniac; or 200 grammes of fine powdered brick-dust, 100 ditto sea-salt, 50 ditto sulphate of zinc, and 12 ditto saltpetre; or 100 grammes brick-dust, 25 ditto sal ammoniac, 12 ditto sea-salt, and 4 ditto tartar. Neither of the named receipts furnish a satisfactory result, as the two first cause a loss of gold (as one's good sense must tell, that it should be particularly avoided to use together saltpetre and sal ammoniac), and the latter always retains a quantity of silver. The following is the most efficacious as well as the most simple:—50 grammes of fine brick-dust, 16 do. sea-salt, 16 do. alum, and 16 do. sulphate of iron.

2. *Preparation in Mass.*—Sea-salt, alum, and sulphate of iron, in the highest state of dryness, are finely powdered, afterwards poured on the brick-dust, and all mixed together until there is an homogeneous mass. This powder is then moistened with a little vinegar, so as to form a paste, which is beat up in a pan or crucible, with the gold to be refined in the middle; when the gold is in small particles, it can be stratified in layers alternately in the crucible.

3. *The quality of the Gold to be Refined.*—This method does not succeed well, but with gold of 8 to 12 carats. As with richer gold the materials that dissolve the impure portions cannot penetrate easily the mass, because there exists too small a number of pores, therefore for finer gold there must be added a small portion of copper, until it becomes to the requisite title. With gold under 8 carats there is this inconvenience, that the mass of gold which remains after the operation, has not a sufficient consistency to be extracted, without loss of the cementing powder.

*Heat required in this operation.*—The crucible, or vase, being placed in the middle of a charcoal fire, it is then covered over with its lid—then heated slowly, so that it arrives at a pale red heat at the end of three or four hours. The length of the operation is regulated according to the thickness of the gold; and if it is flattened leaf-gold, it is refined the quickest and easiest. Should too high a heat be given, the decomposition of the materials is too quickly effected, and does not exercise a sufficient action on the gold. As soon as the crucible is cooled, the powder which is encrusted round the gold is taken off, and then the gold is washed with boiling water, so as to clear it of any superfluous particles. The gold in this state is quite porous, and without consistence—possesses a pure yellow colour, and is melted with borax. The chloride, which disengages itself from the sea-salt, under the influence of sulphuric acid and sulphate of iron, transforms the metal into chloride; but according to the heat at which it is exposed, the gold is reduced to a metallic state, whilst the other metals remain below in the cementation powder. The alum should be used only to delay the fusion, and the brick-dust procures by its division a continuation of chloride. It will, therefore, appear evident from the above that the process of cementation surpasses all the others for its simplicity, facility, and exactness, but great care must be taken by conforming to their portions, and the result is certain.

## **TEMPERATURE OF THE EARTH'S INTERIOR.**

J. S. ENYS, Esq., read a paper at the Royal Geological Society of Cornwall on this subject—an important one, inasmuch as the writer believed that the gradual increase of temperature would probably form the limit to the working of deep mines. Water, by means of our present improved machinery, might be drawn from a depth of perhaps 400 or 500 fathoms; but at 300 fathoms, the temperature of the earth is nearly 90 deg.; and, assuming the ratio of increase to be constant, and approximating as 1 deg. in fifty feet, the temperature at 500 fathoms would be about 114 deg. This opinion was somewhat confirmed by the recent increase of the temperature of the water at United Mines to 105 deg. Mr. Enys adverted to Mr. R. W. Fox's calculations, from which it appeared that there was a decreasing ratio of increase of temperature—that as we descend, a larger space, in feet, is required to raise the temperature 1 deg.—an idea by no means in accordance with the conditions that might have been expected from the action of central heat. For the purposes of his paper, however, Mr. Enys referred to a constant rate of increase; and proceeded to speak of the theory, to which he is opposed, that steam is the agent by which alterations of the earth's level are effected; so far as concerned the comparatively tranquil upheaval of continents or large areas of ground, observing that on the theory of a high central temperature, volcanoes were small defective portions of the boiler, acting as safety valves. Mr. Enys was of opinion that water, descending from the earth's surface, would be converted into steam; and hence there would result an ascending current of hot water, and a descending current of cold water, resting on a stratum of steam interposed between the water and the heated mass of rock. The steam would thus escape by the passages through which the water descended; but it was possible that at a considerable depth, steam, if confined so as to become much more dense than water, might cause an upheaval of the superincumbent rock; the difficulty, however, was in the formation of its prison, for without confinement, it would pass off as heated water. Of the fact of the upheaval of considerable areas of ground, the nearest evidence was the belt of raised beaches surrounding Devon and Cornwall. As an illustration of the mode in which such upheaval occurred, Mr. Enys read an account of a recent earthquake in Chili, obtained from Lieut. Sullivan, of the *Beagle*, which was further interesting as bearing on the theory of the formation of lodges, and their complexity. Mr. Enys was of opinion that upheaval must necessarily be accompanied by secondary subsidence—an opinion which was confirmed by the account of the earthquake in Chili—and then adverted to the astronomical objections that would be due to upheaval without compensating subsidence of an adjoining portion of the earth's surface. In reply to the Rev. J. Punnett, Mr. Enys said he had assumed in his calculations, that the density of rocks was constant, as they increased in depth.—Mr. Punnett then observed that the assumption was gratuitous, that the condition of the rocks remained the same at a depth of twenty miles as at the surface, if subject to such an intense heat as an increase of 1 deg. in fifty feet would amount to. He thought, therefore, the theory of the expansion of steam might account for the elevations of the earth's surface.—Mr. Enys said he did not deny the possibility of the action of steam at great depth.—Mr. Carne said, though it had been ascertained that there was a certain increase of temperature at a certain depth, we had no standard whereby to measure the degree of heat that must exist at a depth of twenty miles.—Sir C. Lemon said he did not understand Mr. Enys to say that he based his calculations on going to such a depth. Sir Charles added, that if they adopted the theory of the action of steam, they must calculate on an accession of fresh steam, continuing to act with the same degree of force as when the motion first began.

*IMPROVED HOT BLAST FURNACE.*—Mr. John Dixon, the iron manufacturer of Wolverhampton, has obtained a patent for employing the heat derived from the furnace, for heating the air blown into it to smelt the contents. The mode of carrying out this plan is by letting into the brick-work, on all sides of the furnace, several chambers immediately over the tuyere pipes, within about three inches of the inner face of the furnace. These chambers enclose a bent tube, or, instead of a tube, passages may be made therein—through which cold air passes, supplied by any blowing apparatus, and in its course becomes heated; the hot blast thus produced will find an exit through the tuyeres into the furnace. When air of great heat is required, it is proposed, in place of the brickwork, to face the air chambers with clay or stone-work, perforated with holes, through which the heat of the furnace passes direct to the chambers. Instead of the heated air passing off from the chambers, as above mentioned, it may be carried away from the furnace by pipes, and be used for any other purpose.

## **LITERARY NOTICES.**

*Quarterly Journal of the Geological Society of London.* Longman and Co., Paternoster-row.

The proceedings of the Geological Society have, during the past quarter, developed the most interesting communications, and although, perhaps, there is not that variety in the present Quarterly Journal, that we have seen in former publications, yet the importance of most of the papers will make up for the want of number. We have articles by Lyell, Sedgwick, Mackintosh, and Murchison, and a long paper by Lonsdale on the economic corals of North America. Lyell's paper is on the older tertiary formations of Virginia and South Carolina, but gives us no opportunity for extracts, though interesting and complete in itself. The Rev. A. Sedgwick has contributed an essay on the comparative classification of the fossiliferous strata of North Wales, with the deposits of Westmorland and Lancashire. Mr. Bayfield on the transition rocks of Canada; and A. F. Mackintosh, Esq., on supposed glaciers in North Wales. With respect to this interesting subject, the author having noticed some remarkable phenomena in one part of North Wales, which seemed to militate strongly against the theory advanced by Professor Agassiz, and supported by Dr. Buckland, on the subject of glaciers, he examined the district in question, and, after long investigation, came to the conclusion, that the district affords no sufficient proof of the former existence of glaciers in any part.

And, first, with regard to rounded surfaces of rock relied upon by Dr. Buckland and Mr. Agassiz, as proof of the former existence of these masses of ice, Mr. Mackintosh shows that these rounded masses are at such an elevation that the glaciers must have occupied the whole height and depth of the valley, giving the ice a thickness in many places of 2500 ft.; rounded surfaces are also found in deep sharp angles of rock, and in recesses, where it is not to be conceived a glacier could have forced its way, and produced the effect, leaving the crag sides of these recesses unbroken by friction about the angles. In some cases, the rounding of the narrow part is perfect, and they are occasionally even fluted, in a manner identical with that of other things in the exposed and open parts of the rock. Another example is in the valley of Ogwyn, near the bridge; here the rounded rocks are weathered, but quartz veins, which traverse the masses, project two inches above the surface, and are polished and rounded on the edges. He considers that, although at first sight these appearances seem referable to glacial action, they must be accounted for in some other way; the author observed that the direction of the strata, or fissures, are not parallel, or in the direction of the line of the valley, but range at all points of the compass, and many of them crossing each other irregularly; he is of opinion, that this rounding took place beneath the sea, and that the repeated undulations of the strata have been the original cause of the formation of the oblong bosses and rounded rocks, while the fracture of the beds has produced the furrowed appearances.

2. *Fluted and striated surfaces.*—The author then proceeds to show that fluted and striated surfaces are really due to other causes than the passage of masses of ice, and he first considers the crag sides referred to by Dr. Buckland, and situated about 100 yards below the bridge of Pontaber Glaslyn, near Bedd-Golest on the right bank of the river—here the rocks are rounded, and polished, and covered with flutings, parallel to the course of the valley, but here this is not always the case, some being oblique, and some actually opposed to that direction. The flutings, in the cases under consideration are considered to be too regular and too uniform to be produced by the passage of a glacier; they are placed at nearly regular intervals, and are strikingly similar to striae in other valleys. It is, therefore, concluded, by the author, that these striae, or flutings, are due to structural phenomena.

3. *Polished rocks.*—The surface of rocks have often been observed to exhibit a polish, and this has been attributed to the action of ice; the author, however, considers most of these cases doubtful; the polish does not endure long when exposed, and some of the examples in North Wales may, at least, be referred to boys sliding on the smooth rock—this explanation he considers sufficient for the case; near Pontaber Glaslyn, where a portion of the surface, 15 feet by 2 feet, is polished, while all the rest is weathered and rough. Other instances, too, the author considers insufficient to account for the glacial theory, such as where the rock is intersected with veins of quartz, which project two inches from the surface, the surface still having a polished appearance, when no glacier could have touched. Professor Murchison's paper on the deposits of Scandinavia and the Baltic are highly interesting, a digest of which we shall give in our next.

*The Bankers' Magazine and Journal of the Money Market.* Groombridge and Son, Paternoster-row.

The twentieth monthly number of this periodical has just appeared, and fully supports the character which the work has sustained from the commencement—viz.: a careful review of the principal large transactions or undertakings of the day, likely to affect the money market, and a digest of money affairs during the month, bearing immediately on banking business. The first article in the present number is—"The effect of railway calls on currency and credit," an able paper, in which it is clearly shown, that the payment of the deposit of 10 per cent. into the hands of the Accountant, can, and will be, effected without the abstraction of capital, whilst the *Bankers' Magazine* will arise from that establishment, rendering the repeal of the Union physically and morally impossible, by the blessings they will confer upon the inhabitants. With relation to the vast consequences which must ensue from the establishment of railways in Ireland, he observes—"The time has arrived, or is fast approaching, when the operation of natural causes will assert the grand truth, that no community can be truly wealthy and happy, however apparently prosperous in its undertakings, if a neighbouring community, with which it cannot be truly great and powerful as a whole, if a considerable portion of it is prostrated with want, weakness, and despair." This, indeed, true, as respects Ireland in connection with England, for never will the latter hold that high place which is her due, even in her own estimation, while Ireland remains degraded, but we have no doubt, that the carrying out a complete system of railways in that country will work out a complete amelioration of the condition of her inhabitants, and eventually place her as to laws, civil rights, and general policy, on a footing with ourselves.

*The Railway Register, and Record of Engineering and Public Companies.*—John Weale, Holborn.

The November Number of the *Railway Register* has just appeared, and, what with maps, advertisements, and original matter, it has truly become a gigantic volume. It is clear that the parties filling the editorial department spare no pains to render the work a perfect transcript of all proceedings relating to railways during the month. The Number under notice, commences with the continuation of a paper on "Railways in Ireland," in which the author describes the political and social advantages which will arise from that establishment, rendering the repeal of the Union physically and morally impossible, by the blessings they will confer upon the inhabitants. With relation to the vast consequences which must ensue from the establishment of railways in Ireland, he observes—"The time has arrived, or is fast approaching, when the operation of natural causes will assert the grand truth, that no community can be truly wealthy and happy, however apparently prosperous in its undertakings, if a neighbouring community, with which it cannot be truly great and powerful as a whole, if a considerable portion of it is prostrated with want, weakness, and despair." This, indeed, true, as respects Ireland in connection with England, for never will the latter hold that high place which is her due, even in her own estimation, while Ireland remains degraded, but we have no doubt, that the carrying out a complete system of railways in that country will work out a complete amelioration of the condition of her inhabitants, and eventually place her as to laws, civil rights, and general policy, on a footing with ourselves.

*AMERICAN MINING IMPROVEMENTS.*—A patent has been taken out by Mr. James Towers, Madison, U.S., for an improvement in the mode of preparing, applying, and using certain fluxes for the reduction of ores in the blast-furnace; the patentee thus specifies his claim—"What I claim as my invention, and desire to secure by letters patent, is the application of those earths or minerals which are dissolvable or diffusible with water, and have an adhesive nature, and can be made into a paste, pap, or grout, with the above or other liquids, and can be applied as other fluxes for the reduction of ores or minerals in the blast or other furnaces. I claim the application of the above preparation, as herein described, to other minerals as well as iron, which have a similar objectionable tendency, while smelting, that is found with iron. I do not claim any special right to the use of the above fluxes in a dry or natural state; it is only after they have been mixed or diffused with water or other liquids, and formed into a paste, pap, or grout, and applied as a coating or adhering substance, as herein described, that I claim as my invention, or discovery, and desire to secure by letters patent."

*NEW MODE OF PURIFYING GAS.*—Coal gas is at the present time purified by the wet and the dry lime processes, and in each the lime is thrown aside, and fresh lime used. Mr. H. Phillips, chemist, of Honiton, Devon, has taken out a patent for a new process. He passes the gas through both wet and dry purifiers: first, using fresh dry lime, he passes the gas through it, and when saturated, fresh lime is employed; and that which was used is to be immediately mixed with water, and kept in a vat, to be used in the wet purifiers, when it will be found to have nearly the effect of fresh lime—thereby causing a great saving.

*THE CWM AMMON IRON AND COAL COMPANY.*—This company—the formation of which we noticed in a former number—has been established for carrying out the views of a former proprietor on a smaller scale, having obtained, on most favourable terms, an extensive property near Cwm Ammon, admirably situated for the erection of iron works, and possessing (in addition to extensive beds of anthracite coal, and iron ore) a large amount of water power, available for the purposes of working. The value of iron made by anthracite coal is rising in the market; and the success which has attended other large iron works in the neighbourhood, and the present great demand for iron, justify the expectation, that large profits will rise from extensively working this property. There are ninety-three years unexpired of the lease; limestone is obtained in the neighbourhood; and the present works are constructed on the Llanelly Railway, fourteen miles from the shipping place. The capital is 100,000l., in 5000 20l. shares.

*METALLIC IMPORTATIONS AND EXPORTATIONS OF RUSSIA.*—By an official return, published at St. Petersburg, it appears that the metallic exports in 1843 amounted to 82,565,600 roubles in silver, worth about 13,200,000l. sterling; the importations were 73,028,399 roubles, or about 11,680,000l. sterling. This, compared with the exportations and importations in 1842, presents a decrease in the former of about nine millions and a half of roubles, and the latter two millions and three-quarters of roubles. This decrease is easily accounted for, as Russia possesses most extensive gold and silver mines, which they are working to a very great extent, although the greater part belongs to Government, and the remainder to the high aristocracy, as very few private individuals have a share in her rich mineral resources—the consequence is, that the bullion market is monopolised by the autocrat Nicholas and his leading nobles, excluding annually the importation of the precious metals from England, Germany, and France, and, as a matter of course, the exportation to the same.



**GLAMORGAN CENTRAL MINERAL RAILWAY COMPANY.**—(Provisionally Registered.)—The provisional committee have the pleasure to announce, that the committee of the shareholders of the Duffryn Railway and Porth Cawl Railway Company have consented to the CONVERSION of their SHARES into the shares of the NEW COMPANY, in preference to a money payment, at the estimated value. By order,  
38, Threadneedle-street, Nov. 1, 1845. J. H. ROWLAND, Sec. pro tem.

**GLAMORGAN CENTRAL MINERAL RAILWAY COMPANY.**—(Provisionally Registered.)—NOTICE.—NO APPLICATION for SHARES can be received after SATURDAY NEXT, the 8th inst., in the country, and MONDAY, the 10th inst. in London. By order,  
38, Threadneedle-street, Nov. 1, 1845. J. H. ROWLAND, Secretary.

### MAURRAS'S FILTER—SUPPLY OF PURE WATER.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—In your Journal of the 11th instant, Mr. Burt, in his paper "On the Supply of Pure Water to the Metropolis," &c., has denounced Maurras's filter, and attempted to show that its adoption on the large scale would tend to a "sound system of filtration." Now, it is quite evident to me, that Mr. Burt has undertaken to attack an invention which he has not fairly examined in its practical working; that he has, probably, never seen a large machine in operation, nor informed himself respecting any one machine, how long it had been at work, and how it continued to effect the object of its inventor. Had he done this—had he seen a filter in operation for months, and found its effect as a filtering machine unimpaired, and that it continued to yield a perfectly transparent and colourless water in unvaried abundance—had he seen the efficacy of the cleansing operation, and the removal in a few minutes of the dirt arrested from the water by filtration—he would have joined all the most distinguished engineers and men of science who have seen and tested it, in their approval of the machine as a perfect, continuous, most effective, and economical, filter, and admirably adapted for filtration on the large scale; he would have avoided approaching a subject evidently so dangerous to his views, but have passed it in silence, and have proceeded to attack filtration in principle as a means of purification, which I presume to be his object, antecedent to the introduction of the main object—the re-formation of another pure water company. He has not done so, however; but has attempted to depreciate the value of Maurras's filter—and I claim the privilege of replying. I must first observe, that Mr. Burt, having to cry down a very perfect invention—having (excuse the expression) the wrong pig by the ear—like many others in similar circumstances, has made a jumble of it, and if I chose to take his paper to pieces, and reply separately to his confused unlogical statements, unsupported by either reasoning or evidence, I should not have a hard task, but should be led into writing a most uninteresting and lengthy paper, which last I have not the intention to do. Without, therefore, referring to the objectionable, obscure, and contradictory passages of his paper, I have endeavoured to get at the meaning of his objections, and it appears that his principal objection is to sand as a filtering medium, which he says "is peculiarly liable to obstruction." I presume that he does not object to the chemical character of the medium, because that would be too palpable an absurdity; it is what he calls its peculiar liability to obstruction that he states and possesses as a filtering medium, and which makes him object to it for the purpose of filtration. Now, not only do I deny this, but maintain, that if there be one substance more eligible than another for a filtering medium, it is sharp sand, both on account of its chemical inertness, as well as its physical nature. At the risk of being led into the theory of filtration, further than I wished here, I must meet this principal objection: there are two kinds of filtration, the superficial and the penetrating; the first, the superficial, is that which takes place with paper, cloth, or highly compressed filamentous substances, or extremely compact stone, &c.; the dirt is arrested on the surface, in consequence of the extreme fineness of the pores, and filtration is quickly retarded, or stopped by the pores becoming covered and closed by the dirt. The second kind, which I call penetrating, is exemplified in filtration through sand; it has the advantage of presenting a much larger surface for filtration than the exposed surface of the filtering bed; the grains of sand vary considerably in volume, in dimensions, and in the irregularity of their surfaces, and when pressed together in a filtering bed, or machine, the medium presents over its whole surface, and through its substance, various sized pores and passages in continuity with one another. Each pore is bounded by the lines and points of contact of the contiguous grains of sand. If, in imagination, we trace the passage through the sand of a small stream of water, holding its particles of dirt, it will be understood that each particle of dirt is carried by the stream through the pores and channels, until it is arrested at a passage too small for it to pass; it is there held, and as the lines and points of contact of the sand form the small passages, they constitute the retaining teeth, as it were, of the filtering medium, and the inclosed pores or cavities between the grains of sand, are the receptacles or store rooms of the dirt; these pores gradually fill, the passages at first open to the currents of the water gradually close; the direction of the currents change as the passages become obstructed, and the quantity of water passing diminishes, until filtration would be stopped, or nearly so, if the passages were not opened, and the dirt removed from the pores or store rooms. But there is no "peculiar liability to obstruction" in the physical constitution of this filtering medium; on the contrary, as it filters or strains to a certain depth below the surface, it is greatly superior to any of the materials which have been proposed to be used in filtration, as much so as it is in its chemical nature. The difficulty of removing the dirt from the sand, effectually and simply, was unsurmounted until 1842, is true, but Maurras's method of cleansing does it perfectly. He not only returns a current in the reverse direction to the filtration, "all the modifications of which method (Mr. Burt says) have proved inefficient, inconvenient, expensive, and impracticable;" but he produces the very agitation, which, Mr. Burt says, "is required to dislodge and detach the extraneous matter between the grains of sand;" and this Maurras's system does perfectly, practically, efficiently, very simply, and economically. In fact, the object of the contrivances in his machine is by a powerful current, producing violent agitation, and rushing eddies between the grains of sand, to dislodge the dirt, which the water, in its tranquil flow through the sand, deposits. All the ingenuity and application of mathematical principles, in the method of retaining the fine filtering sand, aims at this, as the ultimate object. The sand is so placid, and firmly compressed in the machine, that it is exposed to the action of water above and below; allows a free passage of water to its surfaces, and yet is as firm and immovable as a solid stone would be in the machine; and, by this solidity, admits of the violent shocks of a reverse current of water under a considerable pressure, suddenly stopped at intervals, or reversed, which is absolutely necessary to remove the dirt which accumulates in the store pores during the process of filtration. Any one who has ever seen a 3-in. pipe burst, by suddenly stopping the current of water flowing from it, will comprehend what is the force applied to rinse the sand in Maurras's machine, by suddenly arresting the full flow from a 3-in. or 4-in. pipe, and a 20-ft. or 30-ft. head. The action is rapid and most effective, and if Mr. Burt had ever taken the trouble to examine it, he would not have had the unwise hardihood to venture the assertion, that the dirt "would not be removed." He may attack filtration, as a principle of purification, which I presume to be his intention, but it is neither fair or prudent, to jumble together in one indiscriminate censure the filter beds of Chelsea, Battersea, &c., and Maurras's system, which is directly the reverse of the former, is intended to remedy, and does remedy, their great defects. I should be occupying a great deal too much of your already crowded columns, if I entered at present into the cost of filtration on the large scale, by the respective systems; or replied further to some passages of Mr. Burt's paper, which, perhaps, deserve it. I am prepared to maintain, however, in opposition to that gentleman's dictum, that in Maurras's system the filtering medium is, in every respect, the best adapted for extensive and continuous filtration, that it cannot communicate a germ of putrefaction, the dirt being removed at short intervals, and that, consequently, it retains its porosity unimpaired, and may be relied on at all times, and under all circumstances, for the calculated quantity of filtered water. And, further, that besides the advantages it presents of occupying very little space, as each superficial foot of filtering surface passes from thirty to forty times the quantity of water filtered at Chelsea, Battersea, &c., it is much cheaper, both in its first construction and annual management; it must combine all these advantages to be worth serious attention—viz., brilliant mechanical filtration, non-contamination from the filtering medium, at all times and seasons, and cheapness of construction and management; and if it fall in any one of these points, I will denounce it, from a conviction that at the present day a combination of these utilities is requisite, to make a sound and practicable system of filtration, worthy of support, and capable of being adopted.

B. G. SLOPER,

### PORTSMOUTH AND LANGSTON RAILWAY AND DOCK COMPANY.

(Provisionally Registered, pursuant to 7 and 8 Vic. cap. 110.)  
Capital £2,000,000, in shares of £25 each.—Deposit £2 12s. 6d. per share.  
[No shareholder to be liable for more than the amount of his shares.]  
OFFICES—46, MOORGATE-STREET.

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The Right Hon. Lord Stephen Chichester  
The Right Hon. Lord Edward Chichester  
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John Onions, Esq. Broseley, Salop, Ironmaster, director of the Dudley, Madeley, and Broseley Railway, Grand Junction and Cambrian, and London and Dublin Approximation Railway  
Isaac Taylor, Esq. Monkmoor, Shropshire, director of the Direct Birmingham, Oxford, and Reading Railway  
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Richard Thurlfield, Esq. Much Wenlock, Salop, Magistrate.  
Robert Andrew Riddell, Esq. Brynaston-street, Portman-square, chairman of the Exeter, Dorchester, and Weymouth Railway.  
John Reginald Riddell, Esq. Bynall house, Enfield, managing director of the Leeds and London Railway.  
Alexander Riddle, Esq. Brandon Cottage, Bristol.  
Richard Lambert, Esq. Elyton Hall, Sudbury.  
George Henry Thompson, Esq. Greenwood Park, Co. Down.  
Richard Clay, Esq. of Gooles, and Winchester-buildings, Old Broad-street, director of the Huddersfield and East and West Coasts Junction Railway.  
Henry Digley Cockburn, Esq. Woolwich  
(With power to add to their number.)

**Solicitors.**—Messrs. Coverdale and Lee, 4, Bedford-row, London.  
**Parliamentary Agents.**—Messrs. Dorrington, Hayward, and Ellcombe.  
**Engineers.**—Messrs. Rennie.  
**Secretary.**—George W. White, Esq.  
**Bankers.**—London: Messrs. Glyn, Hanbury, Mills, and Co.—Liverpool: The Bank of Liverpool.—Manchester: The Bank of Manchester.—Birmingham: Messrs. Atwood, Spooner, and Co.—Leeds: The Leeds Banking Company.—Portsmouth: Messrs. Grant and Co.

Successive administrations, from the time of Mr. Pitt, have recognised the importance of establishing, at a point of the southern coast of England, within an eligible distance from the metropolis, a harbour, with docks and warehouses for bonding merchandise, whereby all vessels from the westward may save the delay and expense of a voyage up Channel, and avoid the risk to which tedious and dangerous navigation necessarily exposes them. The political considerations which originally suggested the necessity of such a harbour, were, of course, infinitely strengthened by the revolution effected in naval warfare through the agency of steam; while the vastly improved modes of transit between London and the provinces invest such an undertaking with a commercial importance which could not have been previously anticipated.

On the whole southern coast, from the Land's End to the Nore, Langston affords the only harbour adapted to the combined purposes here indicated. Its proximity to the great naval depot of Portsmouth—the unequalled excellence of its anchorage—the capacity of the docks for the reception of vessels of the largest tonnage, which it will be accessible to vessels of every burden to establish its nautical superiority; while with London, only sixty-six miles distant from the docks, a rapid communication is insured by railway.

The promoters have great satisfaction in announcing that the undertaking has received the approval of the Lords of the Treasury, of the Board of Ordnance, and of the Woods and Forests, whose sanction is a guarantee for the intrinsic excellence of the measure on public and national grounds. A grant of Crown lands for the site of the docks has been obtained subject to stipulations most favourable to the company. The circumstances under which the land is secured, will allow of such a reduction in the scale of charges and the expenses of management, compared with those of similar establishments, as must at once command an extensive business, and the committee feel assured they may recommend the undertaking as an investment likely to prove highly remunerative.

The plan inclosed with the prospectus exhibits the situation of the intended docks and warehouses, and of the adjacent localities in connection with the harbour. The area proposed to be inclosed by the boundary wall is 290 acres, of which 100 will be appropriated to docks, and 120 for warehouses, quays, roads, &c. Of the immense extent of the commerce for which these advantages are available at Langston, some idea may be acquired from the subjoined data taken from the official returns presented to Parliament during the last session:—Tonnage of vessels registered at Portsmouth for the year 1844, 13,623 tons; of coasting-vessels entering the port of London during 1843, 2,901,571 tons; of ships entering London from the colonies during the same date, 492,085 tons; of vessels entering from foreign ports during the same date, 914,592 tons; and of general shipping entering during the same period, 1,317,671 tons—total, 5,439,922 tons.

The sources of the contemplated traffic and consequent revenues of the company are sufficiently obvious to those who are at all acquainted with the nature of the import, export, and coasting trade of the country; but to the public generally the following statement may be necessary. The inducements to shipowners and merchants to adopt Langston are of the strongest possible nature; for not only are the well known perils of the Channel altogether avoided, but the saving on a voyage up and down Channel, a distance of 300 miles each way, would be on a vessel of 150 tons, £210 6s. 6d.; of 300 tons, £410 2s. 6d.; of 600 tons, £820 12s. 6d.; and on one of 1,000 tons, £1,230 12s. 6d., exclusive of the saving of insurance, the difference of port charges, pilotage, light dues, seamen's wages, and various other items of expenditure familiar to every merchant and shipowner.

Though it is impossible to approximate to an accurate estimate of the proportion of this vast trade likely to be secured to Langston, yet it must be evident that much of it must be secured, and that even a fractional part of it would alone constitute a very extensive business. But it will be apparent that a large proportion must be concentrated at the Langston docks, when it is considered that a great portion of the goods imported into and bonded for exportation; that such goods cannot be deposited so advantageously as at Langston, to which the privileges of a bonded port are already accorded by the Treasury; and that these merchandise may be reshipped and dispatched to sea more speedily and at far less expense than from any other port in the United Kingdom.

In connection with the extreme eligibility of Langston for bonded warehouses, it should be mentioned, that by the railway, to be constructed as indicated on the plan, and by railways now in operation and in the course of construction, mercantile samples may be as regularly exhibited in the offices of the London brokers as from the East or West India Docks. By this mode of conveyance all descriptions of light goods may be forwarded to the metropolis, while a most economic transit to the same destination is secured to heavy merchandise by the canal already opened between the harbour and the Thames.

An important source of emolument may also be anticipated from the large home market in colonial produce and goods borne coastwise, now furnished by a circuitous and expensive route to the populous towns of Portsmouth, Havant, Portsmouth, Gosport, Fareham, and Chichester, and the south and south midland counties. Of these places Langston will naturally have the exclusive supply, and the population whose wants in the consumption of these commodities will be thus administered to, amounts to considerably upwards of 1,000,000, of whom 120,000 are engaged in trade and commerce. This result is obtained by taking merely the counties of Hants, Sussex, Wilts, and Dorset, though a much more comprehensive area may reasonably be included, as certain to participate in the advantages which Langston, of all harbours on the southern coast, alone possesses. Thus this depot for articles consumed within the limited circle described, is in itself sufficient to create a market for the goods, and to ensure the construction of the proposed docks and bonded warehouses. The combined advantages of the locality for all purposes

contemplated by the company, or required in a national or mercantile point of view, leave no doubt of the complete success of this great commercial project, which, while it disturbs no existing interests, is calculated to develop fresh resources of the country, and stimulate individual enterprise to a degree to which no mere private speculation affords a parallel.

At present the rate of interest is estimated at 7½ per cent.; but the most cursory analysis of the merits of this undertaking must demonstrate that such a calculation is considerably below the average of mercantile probabilities.

The surveys are in such a state of forwardness as to insure the application to Parliament in the ensuing session. Until an Act of Parliament be obtained, the affairs of this company will be under the control of the provisional committee of management, which shall have full power to effect arrangements with the projectors of this undertaking for the purchase of their interest in the site for the docks, and to effect any other arrangements whatsoever in anywise relating to the said railway and docks.

Copies of the prospectus and forms of application for shares to be had of Messrs. Coverdale and Lee, solicitors, 4, Bedford-row, London; Messrs. Johnson, Longden, and Co., 23, Tokenhouse-yard, Messrs. Lynam and Bell, and Mr. J. Fernyhough, Manchester; Mr. Hampton, Mr. J. Powell and Lowndes, and Messrs. Neilson, Liverpool; Mr. John Watson, Messrs. Wheatley, Kirk, and Co., Messrs. Wetherburn and Jennings, Leeds; Mr. Nathaniel Lea, Birmingham; Messrs. Tugg and Hodgson, Hull; Mr. Peter Dixon, Glasgow; Mr. James Nicholson, Mr. Charles Couper, and Messrs. Smith and Co., Edinburgh; Messrs. Campin, Dublin; Mr. T. R. Evans, South Mall, Cork; Messrs. Edwards and Son, Bristol; Mr. W. Bolton, Stratford-on-Avon; Mr. B. Cowdery, Reading; Messrs. Warburton and Crossland, and Messrs. Bardwell and Son, Sheffield; Messrs. Hall Brothers and Co., Cheltenham; Messrs. Wilkinson, and Mr. T. Sandford, Exeter; Messrs. H. S. Eady and Co., Southampton; Messrs. Cape and Son, Derby; Messrs. Freeman and Son, Northampton; Mr. Samuel Collinson, and Messrs. Pitt and Levick, Nottingham; Mr. Mason, Bradford, Yorkshire; Mr. Mills, Worcester; Messrs. Hopwood and Palmer, Plymouth; Mr. Richard Hine, Macclesfield; Mr. W. Crowell, Halifax; Mr. T. Boardman, Blackburn; Mr. L. H. Armitage, Wakefield; Mr. J. T. Holland, Coventry; Messrs. Payne and Freer, and Messrs. Windram and Son, Leicester; Mr. Jonathan Galt, Portsmouth; Messrs. Hand, R. W. Ford, Mr. Thos. Burt, and Mr. J. H. Grey, Portsea; Mr. C. Rogers, Gosport; Mr. G. Paul, Chichester; Mr. A. Nicholson, Fareham; Mr. J. Ellis, Falmouth; Mr. J. N. Balm, Gloucester; Mr. W. Fawcett, Salisbury; Mr. G. Grapes, Newport, Isle of Wight; Mr. Deut, Havant; Mr. T. H. Harvey, Weymouth; Mr. W. Sheppard, Exmouth; and at the company's offices, 46, Moorgate-street, London.

### CORNWALL RAILWAY.—THE SCRIP CERTIFICATES

are ready to be exchanged for the allotment letter and bankers' receipt upon the execution of the deeds. The deeds will lie for signature at the offices of the company, 44, West Strand, London, and at the Great Western Railway Office, 29, Gresham street, London, and at the offices of Messrs. Smith and Roberts, solicitors, Truro, from the 21st day of October instant until the 22nd day of November next.—Arrangements will also be made for sending the deeds to some of the principal places in the country, for the accommodation of distant shareholders, who will be duly informed by circular or advertisement. P. P. SMITH, Sec. pro tem.  
Truro, Oct. 18, 1845.

**GREAT WESTERN RAILWAY OF BENGOAL.**—A general meeting of the shareholders in this company was held at the London Tavern, on Friday, the 6th instant.—Major MORSE COOPER in the chair.—The SECRETARY having read the advertisement convening the meeting, which was for the confirmation and ratification of powers to the provisional committee by the shareholders, enabling them to appoint an agent or agents in India, to fix the salaries to be paid to such agents, &c.—the CHAIRMAN observed that the company was in a most cheering position; but situated as they were, they could do no more than they had done—viz., collect their funds, and make every preparatory arrangement ready to act as soon as they received the decision of the Governor-General. He then read a series of three resolutions; the first empowering them to appoint an agent to act in India, to settle his remuneration, &c.; the second enabling them to appoint an auxiliary committee, or committees, in India, on such conditions as they may think most conducive to the company's interest; and the third, giving them the power to execute, or join in the execution, of all necessary deeds, documents, or agreements.—These resolutions having been unanimously carried, the chairman introduced to the meeting John Grant, Esq., as the gentleman whom they had appointed to this important office; and Mr. GRANT returned thanks, stating that he had already been twenty-six years in India, and was well acquainted with the country through which the line would run; he should sail for India on the 20th of this month, and, on his arrival in Calcutta, he should immediately put himself in communication with parties of great influence, and hoped to be successful. It appears that the East India Railway may be considered a competing line, though the present company disclaim all spirit of rivalry—they are proceeding in a quiet but zealous and persevering manner; 36,000 shares have been paid upon in England; 4000 are kept as a reserve for contingencies; and 40,000 were allotted for India—the result of the applications for which will not be known until the arrival of the next overland mail, when probably the decision of the Governor-General in Council will also be known.—R. HARTLEY KENNEDY, Esq., explained the facilities which were open for the construction of railways in India. In consequence of the nature of the land revenue in India every yard of land in each presidency is known as well as a gentleman's manor in England; every field, garden, and almost every bush, was laid down on very large maps, deposited in the proper office in Calcutta, with descriptions of the nature of the soil, whether dry or watery, rocky or marshy, hills or valleys; these maps were at their command, and thus the enormous expenses of surveying were superseded.—A long conversation ensued, for the particulars of which we have not space. The proprietors present appeared perfectly satisfied with their prospects, and a vote of thanks having been passed to the chairman and committee, the meeting separated.

**LIFE-BOAT SOCIETY.**—This society has been originated from the construction of a life-boat of a very superior description, by Lieut. G. Walter, R.M., its objects being to afford the means of preserving human life, in cases of shipwreck, by establishing around our coasts at every preventive or other eligible station, life-boats of this superior construction, and equipped in a manner to be serviceable in the most tempestuous weather. It is proposed that 5s. 5s. and upwards constitute a life member, and that a list of members, subscribing 5s. and upwards, be printed annually. The boat invented by Mr. Walter is composed of a combination of ground cork and Indian rubber, elastic, light, and tough—and yet, such is the consistence, that it is worked with carpenter's tools. The composition is then rolled out in planks of the length and breadth required, placed on a temporary frame diagonally, from gunwale to gunwale, and then glued together with a solution of Indian rubber; two courses of these planks are laid on, and over them a course of canvas saturated with the same material, the whole being 1½ in. in thickness; before being coppered and copper-fastened throughout, the temporary frame is removed, alternate ribs of oak and prepared Indian rubber fixed, and the boat is fitted for twelve rowers; sixteen air-boxes, which can be easily unshipped, and thus form single life-preservers, complete this buoyant and almost indestructible boat. The hardihood and indomitable perseverance evinced on all occasions by the boatmen on our coasts, in rescuing their fellow-creatures from a watery grave, makes it a duty incumbent on us to furnish them with the means of comparative safety, by establishing efficient life-boats, in lieu of those now used by them, which, although good sea-boats, are quite unfit for the purpose; and we trust the society will meet with that success which the importance of its objects merit.

**SOCIETY OF ARTS.**—The first meeting of the session was held on Wednesday, at the rooms of the society in the Adelphi. The attention of the meeting was chiefly devoted to the consideration of some alterations in the bye-laws for the future regulation of the proceedings of the society. Mr. Whishaw, the secretary, has resigned his official connection with the society, and been succeeded by Mr. John Scott Russell, F.R.S.E., well known for his connection with many of the researches and mechanical inquiries that have emanated from the British Association for the Advancement of Science.

**MACHINE FOR COMPRESSING FUEL, BRICKS, TILES, &c.**—A patent has been granted to Mr. T. Middleton, of Loman-street, Southwark, for a machine for compressing the cakes of artificial fuel, brick, tiles, &c. These improvements consist of a series of moulds mounted radially on a rotating circular frame, which brings each mould alternately under a stationary hopper, to receive the composition to be pressed, from whence they are conducted beneath a plunger, where the requisite pressure is given to form the composition into cakes or bricks. These moulds are then carried forward in succession, until they arrive over an opening in a fixed circular plate (which forms the bottoms of the moulds); and by means of a piston, or plunger, rising up through this opening, the cakes of compressed fuel, or the bricks or tiles (as the case may be), are discharged, and then removed by hand. In all previous machines of this description, the clay or composition had a tendency to adhere to the plunger, and thus straining the machinery; to obviate which, the patentee has in this invention adopted a scraping apparatus, which scrapes and cleans the plunger every time it rises, and before it descends on a fresh brick. He also employs a hydraulic apparatus, whereby the pressure can be regulated to the greatest nicety.

**AMERICAN RAILWAY TRAVELLING.**—The Long Island train reached Brooklyn, from Boston, a distance of ninety-six miles, in 2 h. 40 m., and bringing 100 passengers; or reckoning the time of travelling, without stoppages, it averaged about thirty-eight miles per hour.



## \* THE MANUFACTURE OF STEEL IN FRANCE.

We gave, in a former number of the *Mining Journal*, the manufacture of steel in Sweden: we now give that of France,—which will no doubt be read with interest, as great exertions are being made by our Gallic friends, in increasing and improving their iron trade by establishing numerous extra forges in all the iron and coal districts; but the amelioration of their steel is one of the greatest objects they are aiming at, so as to compete, if possible, with this country in that important branch of metallic industry. The manufactories of forged or wrought steel, which, like the iron forges, are materially restrained in consequence of the scarcity of vegetable fuel, only produced, in 1843, 35,273 cwt. of rough steel. In this quantity is comprised 7,883 metrical cwt. of an inferior quality, designated by the name of shear steel, which is generally sold for the making of agricultural implements, at a price that does not exceed that of good wrought iron. The steel metal worked by these forges is, in a great part, produced by a few native high furnaces, heated by means of charcoal,—the greater part of which is imported from Savoy, and the German provinces of the Rhine, where the productions of these metals, from the same causes, exceed certain limits. The following return will show that the production of steel forges has been, for a time, nearly stationary:—

...has been, for a time, nearly stationary.

Years.	Metrical cwt.	Yrs.	Met. cwt.	Yrs.	Met. cwt.
1826 .....	32,568	1835 .....	29,494	1840 .....	35,459
1831 .....	24,673	1836 .....	27,648	1841 .....	32,022
1832 .....	27,443	1837 .....	31,958	1842 .....	31,164
1833 .....	32,557	1838 .....	34,840	1843 .....	35,273
1834 .....	32,676	1839 .....	35,040		

trict of Champagne, which, consequently, will create a great mining enterprise in iron speculation in France; as, by this canal, the extensive coal-beds of the Loire, and the ferruginous beds of the Upper Marne will be united, as they are the two greatest portions of the French territory that are the richest in coal and iron ore. Whilst the production of combustible mineral, of cast metal, iron, and steel, is increasing annually in a rapid progression, all other metals are stationary,—or, more properly speaking, retrograding. In looking over the geological features of France, there is very little doubt that many of her mountainous districts now deserted were formerly the seat of great mining operations. It would, therefore, be in correct to compute the present working of the metallic mines according to the richness of the territory, and the mining history of France will account for this languid state, during the last few centuries; whilst it has been increasing, in considerable degree, in all the other great states of Europe—England, Sweden, Germany, and Russia. The metallic mines are distinguished from all other sources of production by their different variations, even where the richest beds exist, as in some places the ores abound,—whilst in others they are extremely scarce, and thus *vice versa*. No mining operations can prosper without being developed on a large scale, or a great number of beds or lodes worked; so that multiplicity of chances recompenses the irregularity of each metalliferous lode; and, above all, it is requisite that there should always be a large capital in reserve in case of necessity, to make up the deficiency of the produce at certain periods, after the different points have been exhausted, any great public calamity, or commercial panic, &c. It is easy to conceive, therefore, that in consequence of the different events which have agitated Europe since the downfall of the Roman empire, the working of mines have only been able to prosper by a direct intervention, and under the immediate protection, of the sovereign powers. It is under these conditions that, since the tenth century, mineral industry has successively established itself on solid bases, in the great metalliferous chain of mountains of Hanover, Saxony, Hungary, Sweden, and more recently those of the Oural and Altai. It was not so in France; as, until the end of the last century, the science of working mines and metallurgy was completely unknown; and it is only from that period, that it has been the subject of public instruction. Up to that period, all those persons who attempted the exploring or working of mines, were absolutely obliged to have recourse to foreign engineers; and even in the present day, an undertaking on a large scale could with difficulty be carried out, unless their foremen and miners were instructed in some foreign mines to learn the business. Of late years, his Majesty Louis Philippe has had mining colleges or institutions established in the different mining departments or districts, for the express purpose of affording every means to those who intend embarking in mining pursuits of all descriptions, to obtain gratuitously the most accurate knowledge on the arduous and important duties they will have to perform—such as, the different nature of the strata and ore, its approximate richness, &c.,—and particularly the working of coal mines, and the means of preventing accidents from fire damp, and the best plans for ventilation, &c. For this purpose, several of the most eminent engineers in France have been appointed to direct these most useful and beneficial establishments for the education and future welfare of her mining population. It would be highly commendatory to this government were similar institutions formed in our mining districts of Cornwall, Wales, Staffordshire, Durham, &c., for instructing the men, and imparting to them a knowledge of the material they are working, and the dangers they have to encounter by neglect, which would be the means of obviating many accidents.

Years.	Rough cast steel.		Cast-steel.		Yrs.	Rough cast steel.		Cast-steel.	
	Met. cwt.	Met. cwt.	Met. cwt.	Met. cwt.		Met. cwt.	Met. cwt.	Met. cwt.	Met. cwt.
1826	15,000	1580	1837	28,575	4704				
1831	24,122	1580	1838	30,215	6423				
1832	23,184	1687	1839	30,985	6064				
1833	29,642	3249	1840	35,889	8578				
1834	30,163	2659	1841	36,838	9628				
1835	30,383	3233	1842	37,838	10,221				
1836	21,617	3933	1843	38,121	16622				

Already, as we rejoice to observe, has the spirit of mining enterprise extended itself to our fellow subjects of the sister island; and, as the spirit of general improvement has at length, and after ages of inertness in the arts and industry, got abroad in Ireland, we are sanguine in our expectations of that country's rapidly increasing prosperity—of its becoming a *nation* in the fullest sense of that distinguished appellation. To impress upon the capitalists of this country the fact that the sister country was possessed of vast resources in the mineral department of Nature's boundless treasures, and that they only awaited development by means of the application of capital in aid of man's industry, has been long a favourite object of ours—knowing, as well did, that, at no distant period, the stream of that industry must necessarily flow into the channel of enterprise in that development. The "railway revolution" having spread into Ireland with influence, overpowering the presumed habits of indolence of her inhabitants, and having stirred up within and around them the spirit of improvement above alluded to, has also infused a natural spirit into the heretofore discordant factions, whether sectarian or political, causing a coalition of all for the good of their common country—a combination of their industrial activity in furtherance of their mutual interests. This, undoubtedly, is a consummation as happy as it was desirable, and henceforth it may be considered as the bond of peace, and the guarantee of national prosperity. But to return to our subject—the new-born spirit of mining enterprise in Ireland. We find that a company, professedly to "develop the vast and rich resources of mineral wealth long known to abound in the western part of the county of Cork," is in course of formation *within* the county itself, and *without* the aid of the British capitalist, and that the leading capitalists and landed proprietors of the county have given their cordial and powerful support to its formation. This is as it should be, and amply proves that the Irish monied and landed interests are at length aroused to a due sense of the power they possess of developing, without external aid, the mass of wealth which long lay as inert, and as hidden within the bowels of their land, as did their industry and spirit of enterprise, which the "railway revolution" has now called forth in the inmost recesses of their own moral constitution. Let not our Irish fellow subjects suppose that we ascribe their heretofore almost proverbial inertness in the cultivation of the arts of peace and industry altogether to a constitutional failing; but rather the more to external causes, of which the most formidable, in opposition to the cultivation of such arts, arose from an impolitic and oppressive system of Government; yet, it cannot be denied that the native Irish were open to the reproach of being lazy and indolent, and averse to a continuous pursuit of industrious arts, even when the system of misrule had given place to a milder and more equitable administration of Government.

Having now redeemed themselves from that reproach, there awaits them the inevitable reward of industry, physical comforts, and social happiness, and, of course, exemption from the turmoil of political or sectarian feudal or factional strife. We have, upon a former occasion, observed that the wages of labour in Ireland, in consequence of the demand created for it by the construction of railroads, had already arisen two-thirds, and we now find, from estimates in some of the Irish journals, that over 200,000 able-bodied labourers will be in full employment on the works already in progress. A simultaneous working of the mines in the south-west of Ireland will increase considerably the demand for labour in that country, and hence will arise to the English labouring classes a corresponding advantage—*Paddy*, employed at home, will not encroach upon, or compete with, *John's* industry on this side the water—the English market for labour will be left to the English labourer, and in this way will he derive an addition to his comforts, from the capability given to *Paddy* to enjoy similar comforts in his own country. That the mines in the western district of the county of Cork will yield a profitable return to the company proposing to work them, no doubt can be entertained, seeing that those already explored are rich and abundant in ore, and that they possess every advantage of locality for facile transit when railroads are constructed, and for shipment of the ore for exportation. The mines of Cosheen and Gurtinellig, to which we alluded last week, are of exceeding promise; the ore of the former has been found to be the richest and purest as yet produced from any mine, and brought the highest price, as appears by the last return at the Swansea sales. The other mine presents appearances as favourable; and indications of equal promise have presented themselves in explorations making in other parts of that rich mineral district. Slate of a superior kind is found in various parts of it; but the quarries now worked in a small way by individuals, on whose property they are, mostly supply the localities. In the neighbourhood of Bantry, on the eastern promontory, forming the bay, we noticed, about two years since, a vein of slate in a cliff butting over the bay, which vein was subsequently opened by an industrious man, residing in its vicinity, by permission of the landlord, and proved to be of the finest quality of slate, superior even to that of the Burdett quarry, near Glandore harbour, in the eastern division of the same district. This man supplied, by his own industry alone, several of the builders in the neighbourhood with slate; but we are not aware that he was permitted by the landlord to continue his industrious pursuits of quarrying from out the wile vein in this vast cliff a livelihood for himself.

1833 .....	6950 .....	710 .....	6620 .....	14
1834 .....	7480 .....	840 .....	7820 .....	15

1833	6950	710	6620	14,280
1834	7480	840	7870	16,190
1835	7570	700	7870	16,140
1836	9400	1180	8580	19,160
1837	8490	860	8820	18,170
1838	8490	860	7610	17,610
1839	7350	1080	7310	16,340
1840	7870	970	6840	15,680
1841	7550	950	6540	15,040
1842	7502	868	6475	14,785
1843	6717	769	5755	13,245

Having now redeemed themselves from that reproach, there awaits them the inevitable reward of industry, physical comfort, and social happiness.

Years.	SEVEN. Met. cwts.	NORWAY. Met. cwts.	RUSSIA. Met. cwts.	TOTAL.
1831	38,375	3028	1186	42,538
1832	49,544	3142	2809	55,585
1833	47,799	3294	3847	52,940
1834	56,288	2006	1213	61,507
1835	52,006	1772	3516	57,296
1836	40,629	1219	4215	46,063
1837	48,098	433	4285	52,776
1838	48,902	110	3839	52,751
1839	46,181	401	4047	50,299
1840	48,469	119	2574	50,173
1841	43,869	27	3946	47,846
1842	51,553	136	4983	56,672
1843	55,699	673	5870	62,242

the inevitable reward of industry; physical comfort, and social happiness; and, of course, exemption from the turmoil of political or sectarian feudal or factional strife. We have, upon a former occasion, observed that the wages of labour in Ireland, in consequence of the demand created for it by the construction of railroads, had already risen two-thirds, and we now find, from estimates in some of the Irish journals, that over 200,000 able-bodied labourers will be in full employment on the works already in progress. A simultaneous working of the mines in the south-west of Ireland will increase considerably the demand for labour in that country, and hence will arise to the English labouring classes a corresponding advantage—*Paddy*, employed at home, will not encroach upon, or compete with, *John's* industry on this side the water—the English market for labour will be left to the English labourer, and in this way, will be derived an additional

On the total of this importation, about 16,000 cwt. were worked by the cementation steel forges, principally for the improvement of agricultural implements, and for wheels. In 1843, the chief branches of steel industry gave the following returns:—Wrought steel, rough cemented steel, do. cast drawn do., flattened do., dressed do., scythes and files, 294,719*l*.; the total value yielded by the iron forges in 1843 amounted to 6,096,922*l*. sterling, of various descriptions of iron. There is every reason to conclude, from the above, that the forging of iron will greatly extend itself in France. Hitherto, the making of cast iron, to which wrought iron is necessarily dependent, has been principally based on the employment of vegetable fuel, and in consequence of the exhausted state of the forestal resources, in which the iron ore can be worked, has caused a depression. The situation of the French forges is improving in a most remarkable degree; as the production of cast metal, by means of coal, has given a decided impulse. Added to this, it must be stated that, in France, they are making very great improvements in canal navigation, which has greatly increased the produce of the high furnaces by coke. The finishing of the canal of Berry has been the cause of having erected several high furnaces, blasted by coal from the adjacent pits of Commeny, in the department of Allier, which are supplied by the combustible minerals of this district, and by the iron ores brought from the department of Cher. The works now in progress are for uniting the River Saone with the Marne, by means of a navigable transit that will pass through the centre of the iron forges of the district.

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## "MINING IN THE COUNTY OF CORK"

The above is the heading of a very elaborate article in the *Cork Southern Reporter*, of the 25th ult., to which our attention had been directed, but too late for notice in the *Mining Journal* of that week. The writer of this article professes to be a practical miner, and to it he appends the signature—"A Practical Miner." He also states that he is an Englishman. Of both his calling and his country we would have no reason to doubt, from any material evidence derivable from the article itself, other than that he betrays in respect to ourselves—the heretofore consistent and warm advocates for a development of the mineral wealth, and of the other great resources of Ireland—a want of candour incompatible with the general disposition of an Englishman, and particularly so, with the character of an English practical miner, proverbially candid and straightforward as he is reputed to be. As the article is, in other respects, useful, and the more so from the knowledge the writer discovers of the mineral resources of that district of the county of Cork, to which we have recently, in a series of articles, directed public attention, and chiefly that of the mining capitalists of England, we will, before we make more particular reference to its allusion to ourselves, hazard a few comments on it, which may make the useful information it contains of more extensive utility than it can be of, if confined to the readers of the *Cork Reporter*, however large the circulation of that respectable Irish provincial journal may be even in England.

In treating of the mineral resources of the western districts of the county of Cork, we have stated that several attempts have been made of late years to develop those resources, and we instanced that remarkably successful one at Berehaven by the Puxley (a Welsh) family, also those, we trust to be, equally successful ones at Cosheen and Gurtavally, near Bantry; and we also remarked that other attempts had failed, either from bad management or want of economy in the directing and superintending parties in their attempts, and of these we instanced the "Audley Mines" at Ballydubh, in that district. In respect to the abandoned attempts, the "Practical Miner" says—"Although many attempts have been made at working mines in the neighbourhood of Ballydubh, and considerable quantities of copper ore of an exceedingly rich quality produced therefrom, yet they were all, after a short and inefficient trial, abandoned; not from poverty, however, but from a most extravagant waste and misapplication of the capital employed in working them." Of the Cosheen Mine he says, "That mine was discovered about six years since, by Messrs. William Connell and Joseph M'Mullen, of the city of Cork; but the prosperity of it is owing entirely to Mr. Connell's untiring spirit of perseverance, through opposition of no ordinary kind. The ore from this mine is a rich description of the sulphurets of copper, and the produce of the last sale of ore at Swansea yielded 45 per cent. of copper, exceeding, by 20 per cent., the sales of ore from Cuba, Santiago, Australia, and, in fact, of all the mines in the world. Cosheen Mine is the nucleus of a great mining district; it is the germ from which other mines are springing into existence, and, in proof of this, I may mention the Dhuirde and Crookhaven Mines." The "Practical Miner" goes on to say, that "the natural advantages and facilities for working mines in the west of the county are superior to any in the world. Here we have safe and commodious harbours, at convenient distances, all round the coast; and, from the position of the mineral districts, the important item of land carriage is saved—here we have numbers of streams and rivers, that might be applied to mechanical purposes, to an unlimited extent—and here we have valuable lodes staring us in the face in broad day-light, as if in mockery of the apathetic capitalist. The ore is found near the surface, and is equal, if not superior, to any in the world. Here, too, we have such indications of mineral wealth as would warrant and justify the outlay of thousands and tens of thousands of pounds in its exploration and development; but, in most instances, a few hundreds would be ample to prove the value of the undertaking—in fact, the whole tract of district is a vast mineral field, and the time is near at hand when it will be appreciated as such, for it only wants to be known to be appreciated." All this, or more, have we stated, in reference to the mines and minerals of this very district, and to make its mineral wealth "known" and "appreciated," so as to lead to its full development, has been our aim and study. We described the facilities which Nature herself presented in that district for the profitable working of mines in it; we dwelt upon the advantages of the abundance and cheapness of manual labour there, and particularly upon that advantage shortly to be derived from facility of transit for mineral material, from mines inland to the places of shipment, by means of branch railroads; and we expatiated, and, we think, justly, on the great national benefits which would result from the full development of this great mineral wealth. The "Practical Miner" says that the English capitalists have madly expended "frightful sums of money in exploring for minerals in Mexico and the Brazil."—"In distant parts of the globe, over the expenditure of which capital they can have no control, whilst their very next door neighbour holds out such a fair field of legitimate mining enterprise and speculation, which at any time they might come and see for themselves, that their money was economically and profitably employed." This, too, we have stated, in terms as strong, if not stronger, than those in which the "Practical Miner" expresses himself. In his other observations, illustrative of the mineral wealth of the county of Cork, and the means of its development, we fully concur, and we now turn to his notice of ourselves.

The "Practical Miner" says—"A short time since, there appeared in the *Mining Journal* an article written on the mineral districts of this country, referring to the very districts just named. The writer in question expressed a high opinion of it as a mining locality, but concluded by stating, that it would be useless to expect Englishmen to invest their capital in working its mines, whilst life and property was held in such a state of insecurity. I know not who is the writer of that article, but I know very well, that a more deliberate libel was never written—never emanated from the public press. I speak, as an Englishman, from experience, having lived several years among, and in contact with, the poorest people in the country, and in one of the most remote and wildest districts of it—in the midst of a starving people, whose food consists of limpid seaweed, and the worst species of potatoes, and not even a sufficiency of them." &c. "Though surrounded by a dense and suffering population, I have never known an instance where property—a great deal of which was necessarily exposed—to the value of one farthing has ever been stolen or injured. I can also say from experience, that a more peaceable, well-disposed, kind-hearted, generous, and truly hospitable people, cannot be found on the face of the earth. How, then, can any man deliberately state that life and property are insecure?" We have expressed a doubt that the "Practical Miner" is not an Englishman, because of the utter want of candour displayed by him in his allusion to us. We had, in reference to the difficulty of inducing English capitalists to invest capital in Ireland, stated that the difficulty arose, in a great degree, from the notion, but too prevalent in this country, that in the politically distracted state of Ireland, the security of that capital would not be assured to those investing it there, and that with such a notion prevailing, and that with political distraction and the agitation for a Repeal of the Union—which the majority of the English deem to be, if attained, tantamount to a separation of the countries—it would be vain to expect such investment to be made, however obvious the profitable return upon that investment might appear to be.

We never once alluded to injury, either to person or property, from the peasantry or the inhabitants of the district referred to, and of whose character and conduct we have an opinion similar to that entertained of both by a "Practical Miner." If, in the following quotation, our doubt of the "Practical Miner" being an Englishman, and our now expressed conviction that he is rather a sensitive, though a clever, partisan Irishman, be not confirmed, we are much mistaken. "Let (he adds) the writer of the article in question, take the trouble—leaving the sufferings and destitution of the people altogether out of the account—to make a comparison between the population of the south and west of this (Cork) county, and the same amount of population of the most prosperous county in England, and look at the amount of crime in both, and strike a fair balance. Before he again attempts to write respecting the mining resources of the west and south of Ireland, or concerning a people whom he most shamefully maligned." We would seriously ask this "Practical Miner," what upon earth the comparison of the amount of crimes in any district in Ireland or England, has to do with a knowledge of the mining resources of the former, or why the writer upon these last, in the *Mining Journal*, should be called upon to institute that comparison before he writes more on the subject? In all the "Practical Miner" states, in respect to the existence and facility of development, he agrees; indeed, he had anticipated the "Practical Miner," in making them "known" to the people, at least, of Great Britain; and we have every reason to believe that, but for the particular notice bestowed by the *Mining Journal* upon the mineral resources of the western districts of the county of Cork, but little public attention in Ireland would have been directed towards them.

## ATMOSPHERIC RAILWAYS.

TO RAILWAY COMPANIES, ENGINEERS, MANUFACTURERS, IRONMASTERS, AND TO ALL OTHERS WHOM IT MAY CONCERN.

NOTICE is hereby given, that the Atmospheric System, included in Pinkus's 1st and 2d Patents, of 1834 and 1836, and which is now about to be adopted on the Croydon Line, is, nevertheless (although practicable), but a crude and imperfect one of Mr. Pinkus's several systems, and involves an unnecessarily large outlay of capital in the construction, and an unnecessarily heavy expenditure in the annual working thereof; whilst, by Pinkus's new Systems, only about one-half the expense in constructing, and one-half in the working and annual maintenance, is incurred. The former long valve is dispensed with, and the loss by leakage thereof prevented—one line of pipe suffices for a double line of railway; each train is made to move under the influence of two stationary engines, at the termini of a section, simultaneously, by which means the amount of motive power is reduced by one-half, yet affording the required amount of propelling power. The stationary engines work constantly, unhanding power at intervals, when trains are not moving, thus inducing much economy. The propelling main is reduced in size to one-half the capacity required by the former system; yet affording the same amount of propelling power. Trains may be more frequently moved, and without danger. And by a further system (being the Atmospheric Locomotive), one line of pipe suffices for a double line of railway; the train, as before mentioned, moves under the influence of two stationary engines at the termini of a section simultaneously; the columns of air in the pipe does not move with the velocity of the load; the immense loss of power consequent upon friction of air moving rapidly in the tube, is thus avoided; the quantity of air acted upon for an equal amount of propelling power, is only a fifth part of the quantity necessary by the former system—equal flexibility with the common steam locomotive system is obtained, the locomotive atmospheric engines being capable of moving forwards and backwards, as by the steam locomotive, more frequent trains may be moved without loss of time, and without waiting for the re-exhaustion of the propelling tube, the power of the locomotive is greatly increased on inclined planes, without enlarging the tube, and perfect safety, from the possibility of a train moving off the rails, is secured.—These are advantages which Pinkus's other first system, about to be used on the Croydon Line, does not possess.

Licences will be granted, and information may be obtained, on application to the Secretary, at the Atmospheric Railway Offices, West Strand, Trafalgar-square, London.

Communications addressed to Mr. Alfred Gregory, Sec. pro tem.

## THE ATMOSPHERIC RAILWAY GAZETTE.

## THE ATMOSPHERIC RAILWAY SYSTEM.

Having, in our last paper, explained the nature of Pinkus's atmospheric locomotive system, exemplified by plates, and shown the comparative economy of his first system, as on the Croydon and Epsom lines, we further show its economy on a longer line, and, in a future paper, we shall explain the formula by which we arrive at the data for costs.

## ESTIMATE OF PINKUS'S ATMOSPHERIC RAILWAY SYSTEM.

Estimate for a line of forty miles in length, having gradients equivalent to one-eighth of the line rising 1 in 100, and one-eighth 1 in 75; the remainder re-posing levels:—

COST FOR CONSTRUCTION OF ATMOSPHERIC WORKS.		Per 40 miles.
Say, per mile.	Single line of tube for double line of railway, of 12 inches diameter, weighing 226 tons per mile—no boring nor turning requisite, as on the Croydon line—for large contracts, assumed 5s. per ton.	£72,230 0 0
£1508 0 0	Plain sheet metal valve, serving for a double line of railway, weighing 8 tons 16 cwt. per mile, at 12s. per ton, with single bar to secure the same, pins, nuts, &c.	5,000 0 0
200 0 0	Laying valve plate	1,000 0 0
25 0 0	Laying main, jointing, and materials.	6,000 0 0
170 0 0	Intersecting or apposing valves, with fixing, &c. 50s. each	1,200 0 0
30 0 0	For the economy of stationary power, to insure constant working of prime-movers, handspinning power, when trains are not in motion; reservoirs in a fire brick section, with equilibrium valves, and seated on masonry, branch pipes, &c.	4,400 0 0
110 0 0		
£2343 0 0		£93,730 0 0
Say per mile.		Per six miles.
£262 0 0	Assumed line of forty miles length, quarter of which being inclined of 1 in 100 and 1 in 75; the line subdivided into eight sections of five miles each, then the proportion of six sections, or thirty miles of reposing levels with stationary power, equivalent to the lower amount of forty-six horses, say, 50-horse power. In double engines, fitted with expansive gearing, and capable of being worked up to 75-horse power, with air pumps complete, 35s. per horse power, or, per five mile section, 1750s.	£10,500 0 0
218 0 0	On ten miles of incline, with gradients of 1 in 100 and 1 in 75. Three stations provided with engines of 50-horse power at each, at 35s. per horse power, or 2905s. each engine, 8715s. the ten miles	8715 0 0
270 0 0	Engine-house, chimney, and water tank, plain building with iron roof, 1200s. each	10,800 0 0
£750 0 0		£30,015 0 0
Per mile.		Per 40 miles.
£280 0 0	Assume seven such engines in daily use, each one making only four journeys in the day, space travelled over, 160 miles for twenty-eight trains, with provision for extra trains and reserve stock, say, altogether, fourteen in number, these having neither boiler nor furnace, at 800s. each engine	£11,200 0 0
750 0 0	Brought forward	30,015 0 0
2343 0 0	Ditto	93,730 0 0
£3373 0 0		£134,935 0 0

Note.—These amounts include every expense connected with the construction of atmospheric works, applicable for a double line of railway. The application of this system would require rails but of 45 lbs. to the yard, with continuous sleepers, and less heavy ballasting, in lieu of that required with the steam locomotive, with rails of 75 lbs. to the yard. The difference in the lighter works, in these respects, should be set off against the atmospheric works, which will lessen their apparent cost by so much. The works here assumed afford arrangements for a maximum, and more than ever probable amount of traffic. 56 trains of 70 tons profitable weight, equal to 50 tons of dead weight, if moved by locomotive steam-engines, may be made to pass per day at an average speed, including inclines, of 41 miles per hour, 28 of such trains in each direction per day, an amount of traffic, according to the length of the line, more than proportional to the London and Birmingham line, according to its length.

Expense of working line.—Maximum traffic 28 trains per day, of 70 tons profitable load; engines working constantly, generating power when trains are not in motion, inclusive of fuel for same at stations, equal to per ann. on average of the price of coal in country places, 19l. 5s. per mile; engine-men at the several stations; with stokers and attendants; engine-men to the number of locomotives; valve-men, &c., wages of same; maximum amount of repairs for fixed power; oil, hemp, tallow, &c., consumed; repairs of atmospheric locomotive at 10 per cent. on first cost, equal to, say, 146l. per mile, or 5840l. per 40 miles per annum. Then with 28 trains per day of maximum load of 70 tons, with an average speed of 41 miles per hour, considering inclines, being 30 miles out of 40 at 50 miles per hour, found 34d. per train per mile. Several items being included here in working cost which are permanent, and under any circumstances connected with the line, such as wages of men, engine repairs, &c., the only material increase being in the item of fuel, and the gross expenditure in working but slightly, by reason of the reservoirs. The conveyance (assuming a more than probable extreme) of 56 trains per day, of 70 tons weight, would, when divided by the cost of maintaining motive power, amount to about 2d. per train per mile, or passing 392 trains per week, and 20,440 per year, for about 7000l. for 40 miles.

Working expenses.—Assuming trains of 70 tons, on levels and gradients at a speed of 25 miles per hour, being mixed trains, goods, and passengers, 28 of such trains per day, cost per mile per train, 34d.

Calculation.—Passenger trains of seven carriages, first and second class, conveying 168 passengers, each train of about 40 tons weight, at average speed of 41 miles per hour, 50 on levels, 28 in the day, 14 in each direction, cost 34d. per train per mile—for the conveyance of trains of this weight, a proportional reduction in necessary motive power being allowed. The item of fuel, in these calculations, taken at the cost of same in the department where the line may be constructed: other expenses remaining nearly the same as before observed, the only material alteration being in a nearly proportional difference of fuel consumed, the working expenses of fine, divided over 56 instead of 28 lighter trains per day, as per calculation, would incur about a cost of 14d. per train per mile, conveying daily 9408 passengers, weekly 65,856—or a proportionate amount of goods. As on this part of Pinkus's system no travelling piston passes through the pipe, and the absence of the ponderous steam-engine render it less objectionable to cross common roads on the surface level, rendering more expensive works in bridging unnecessary, and greatly reducing the expense in the construction of the way in many situations.

\* Given steam power, being duplicate, for a maximum traffic, so that divided, as above, in double engines, should either by accident be deranged (a circumstance, with stationary steam power seldom occurring), the remaining and distinct engine, at section, is capable of accomplishing the traffic.

## ATMOSPHERIC RAILWAYS—HALETTE'S PATENT.

A rapid stride has been taken towards the introduction of the atmospheric principle for railway locomotion in this country, by the purchase of Hallette's patent, which has for some time been the subject of discussion amongst scientific men throughout Europe. The debates in the French Chambers, in which Baron Charles Dupin and M. Arago took such a prominent lead, have doubtless led to the due appreciation of the improvements made by the celebrated engineer of Arras, who, in his magnificent establishment for the fabrication of implements and machinery, has had ample opportunity of acquiring practical knowledge on all subjects connected with mechanics. It is to be remembered that the system promulgated by Hallette, is said by him to be neither an imitation or a modification of any of the ideas which have been furnished to the engineering world by Pinkus, Samuda, or others, but that it is an original idea, which presented itself to his mind, from observation of the principles followed by Nature, in the admirable adaptation of the human lips to confine within an aperture the air breathed forth with so much strength and power by the lungs. Imitating a conformation, which the student of physiology has always looked upon as one of the most perfect of the human frame, and one of the most beautiful works of Nature, Hallette has adapted to the atmospheric tube a pair of lips, which simply close over the groove. These lips are air-tight hose; their size is such, that when inflated with air, they are pressed together by the re-action against the semi-cylindrical cars, which retain them in their position, and which they exactly fill, thus preventing the external air from entering either from above or laterally.

The connecting arm, which communicates the motion of the piston to the leading carriage, has merely to separate the hose, which closes again as soon as it has passed. M. Hallette has guarded against all those effects which might be supposed to attend upon rapid friction. Atmospheric systems are of two kinds: in the first, as in Clegg and Samuda's (Pinkus's), the action of the moving power is continuous; in the second, as in Pilbrow's, the action is transmitted to the train at a certain limited number of points. The principal advantage, claimed by the systems of this second line, is the diminished leakage, owing to the doing away with the continuous valve, but that advantage is too dearly obtained by their great complication; whereas, Hallette's longitudinal lips so completely and hermetically seal up the groove, and that so simply, that it is confidently believed this system will prove the sturdiest competitor the locomotive has had to contend with.

WEAR OF RAILWAY IRON.—From some returns connected with the working of the Lowell Railway, in the United States, we are enabled to give a pretty correct account of the durability of railway iron, 56 lbs. to the yard. It appears that the first ten miles of the second track of this road was first opened in 1838, at which time an H rail was substituted for the fish-belly pattern, which had been found inadequate. From 1838 to July last, a period of seven and a half years, the total quantity of merchandise which passed over the line was about 720,000 tons, and of passengers and goods 120,000 tons—making a total of 840,000 tons; only one-half of which, or 420,000 tons, passed over the second track. In 1844, the company were obliged to remove considerable lengths of these rails, and substitute new; and, from the continuance of these repairs, it is highly probable the whole ten miles will be changed in the course of the next year—thus making its durability equal to 500,000 tons in eight and a half years; the generally estimated wear being 1,000,000 tons. The iron now being laid down is 63 lbs. to the yard, and costs the company about \$4700 per mile. Dividing this sum by 500,000 tons, the amount of traffic which has worn it out, the result is one cent. per ton per mile; and the company receiving five cents per ton per mile for their freight, leaves them four cents per ton per mile to cover the other working expenses, interest, dividends, &c.

FALMOUTH, HELSTON, AND PENKANCE RAILWAY.—The surveys upon this line of railway are in a very forward state. The plans and sections will be duly deposited with the proper authorities, before the 30th instant—and every step will be taken to insure an application, in the ensuing session of Parliament, for an Act of Incorporation. The proof that this line is much needed is, that the corporations of the towns through which it passes, and the entire of the landowners on its route, are in favour of the undertaking. At present, all the immense productions of the mines, and granite quarries, are transmitted to the ports, over the uneven turnpike roads, in carts,—thereby enhancing the price of the articles in the public markets. This railway, when completed, will effect a great reduction in the cost of transit, and will enable new ground to be opened, which, at present, is prevented being worked by the enormous charge for carriage.

## CENTRAL METROPOLITAN RAILWAY—CHARGING-CROSS BRIDGE.

A meeting of the bridge proprietors was held at the offices, Villiers-street, on Thursday, the 6th inst., to take into consideration Mr. Fuller's offer of purchase, on behalf of the Central Metropolitan Railway.—W. HANLEY, Esq., in the chair.—Mr. LAWRENCE (the secretary) read the minutes of the last meeting, and a protest from Mr. Cope against the sale. The CHAIRMAN informed the meeting that the directors had been able to complete the sale of the bridge at 225,000l.—The contract of sale was read, specifying Mr. Jackson, Sir Joshua Walsley, and Mr. Rehl, as the purchasers; that 10,000l. of the purchase-money should be paid immediately, 108,000l. by the 1st of August next, if the present bridge company should have succeeded in obtaining an Act of Parliament, authorising them to sell, and the remainder when the contract of sale shall have been fulfilled in all its particulars, as far as they regard the present company; and that if the purchasers after this, but before the completion of sale, shall wish to withdraw, that they may do so under the forfeiture of the 10,000l. paid.

It was moved by Mr. SEAGER, and supported by Mr. WALKER, that the sale be approved of.—Mr. STUTLEY expressed his entire approbation of the resolutions.—Mr. ADAMS thought that 10,000l. was a great deal too little as a forfeiture in case of non-compliance with the contract on the part of the purchasers. The sale should be completed at once. They must go to Parliament first, and not only for power to sell, but for power to enlarge the bridge for the passing of horses and steam-carriages.—[The CHAIRMAN: The new purchasers may go to Parliament for this object if they choose.]—As it was, the bridge was taken out of the market; it was kept out of the market for four or five months by three or four persons, and then these gentlemen may turn round and say they withdraw from the contract. All they lose was 10,000l. They offered 225,000l. for the bridge, and to have it at their option to fulfil the terms of the offer four or five months after or not, at the risk of forfeiting 10,000l., not 2s. per cent.—The CHAIRMAN observed that it was nearly 50 per cent.—Mr. ADAMS had heard that the money paid was to have been 20,000l., and this would have been but a trifle, considering that at the expiry of the time in question the risk there is of a fall in the market.

The CHAIRMAN, in reply to questions, said the tolls realised 200l. a week; that there was 11,000l. deposited with the company's bankers that morning. The total amount from tolls was 4,500l. The present purchasers, previous to obtaining the Act of Parliament, could sell the property as they chose.

Mr. HOWLER contended that, until an Act of Parliament was obtained, the sale could not be completed—it was impossible to buy the bridge out and out. Mr. ENGLISH, after some remarks, on other offers having been made to the company, moved, as an amendment, "That Mr. Fuller's offer be declined, unless with option, and that the meeting take into consideration the offer previously made to the directors, of 216,000l."—which was seconded by Mr. Goodall.

On the amendment being put to the meeting, three voted for it.—For the resolutions, 57 of those present voted for, and 7 against them. Proxies and votes—total, 256 ayes, 10 noes.

PLYMOUTH, DEVONPORT, AND STONEHOUSE DOCKS, AND EMBARCAMENT COMPANY.—The objects of this company are, to apply to Parliament for powers to purchase and take possession of the whole of Stonehouse Creek up to high water mark, and all buildings, wharves, bridges, &c., as shall be within 100 yards from its margin—to purchase and take possession of the whole of the five fields, or such part as may be necessary to join the termini of the Great Western Railway at Eldad, in Plymouth, with other property; they propose to excavate the creek, and construct a series of complete and efficient docks, quays, and warehouses, commensurate with the importance of the splendid port of Plymouth, and the commerce, which, on the completion of the railway communication with the rest of the kingdom, will naturally flow to this point. The importance of this port, whether viewed as a situation capable of being made available to avoiding the risks and dangers of the English Channel between London and Plymouth, or the Irish Channel, between Liverpool and the Land's End; or the Bristol Channel, between Bristol and the Land's End—renders this project for the improvement of the harbour, and the accommodation of a large merchant navy, worthy the attention of capitalists. When the railways are complete, cargoes of heavy goods can be transported between Plymouth and London, at a less cost than is now absolutely paid for insurance, while, instead of from six to nine or ten days, the time usually employed by merchant vessels, the goods will reach their destination in twelve hours, dry and uninjured by being squeezed and knocked about in the hold of a vessel. The capital required to complete this great national work is 500,000l., and there is every reason to believe that the traffic brought to the port, and the wharf dues, rents, and tolls, would pay a handsome return on the investment.



## AMALGAMATION OF PROVISIONALLY REGISTERED COMPANIES OF RAILWAY PROMOTERS.

"Articles of agreement between the Direct London and Manchester Railway Company (Limited) and the Direct Independent London and Manchester (Remington's) were signed on Saturday last, by their respective chairmen. The object is, it seems, to procure the bill of the Direct Manchester in Parliament next session, under the care of a joint board of management, consisting of twenty-four members—twelve from each line. Mr. Dillon is to be chairman of the board, and Messrs. Bailewick and Remington engineers. Thus ends, in an amicable union, the war between the two companies."—*Mining Journal*, Nov. 1.

Sir,—The above announcement, extracted from your excellent journal, affords me an apt text for opening an inquiry into the nature and extent of the powers exercised by certain majorities of provisional committees, constituted for railway purposes. It appears that lay and legal committees-men have assumed, as a comfortable certainty, that, in cases where peace is deemed to be more profitable than war, competing companies of promoters are at perfect liberty, not only to lay down their angry arms, but to form out of each other's hostile camp, a fond fraternity of jobbing brothers, who can, upon a larger scale, delude, mystify, and, perhaps, plunder the public. Nothing can be more cheering to the philanthropists of Capel-court, than these amicable arrangements—yelept, amalgamations; by means of which millions transform themselves into millionnaires; but, alas, for the theology of Mammon worshippers! for their faith and practice will be found utterly at variance with the churlish law of our lawyer-ridden land. On referring to the 7th and 8th Vic., cap. cxx. sec. 23, any rational reader, unencumbered with wig and gown, may clearly perceive, that a provisionally registered company of railway promoters are absolutely prohibited from performing any acts, other than those which "are necessary for constituting the company, or for obtaining an Act of Parliament." Now, in the case immediately before us, it appears that two companies, respectively registered, have, in point of fact, taken upon themselves to nullify their legal individuality, and to melt into each other's embraces in a way which the law positively forbids. If amalgamation of conflicting interests were desirable, the true and proper course was for each company to wind up their concerns, record their dissolution, and then constitute, *de integro*, a new company, legalised by a fresh provisional registration. As the affair is stated in your journal, it is plainly a stupid, if not a sinister, arrangement, trumped up by some interested parties, who have either ignorantly overlooked, or wilfully outraged, the stringent and salutary provisions of the existing law. I am aware that some briefcase barristers, metamorphosed into getters-up of sham railway lines, still persist in the mischievous error, that the promoters of railways are not subject to the provisions of the Joint Stock Companies' Act; but nothing can be more futile and fallacious than the doctrine put forth by these would-be block-heads. Just about this time last year, I addressed two short letters to your *Mining Journal* on this very subject; and I am happy to find, that the view which I then took, has been recently confirmed by the weighty opinions of the Attorney and Solicitor General. By an attentive collation of the several provisions of the Act, I saw distinctly that all joint-stock companies, without exception, came under its operation, until a special Act of Parliament sanctioned a special company; and that a railway company could have no legal existence as such, until the passing of their private bill. An association of railway promoters is merely a joint stock company, previous to their being incorporated by Act of Parliament. This construction furnishes a key to the whole of the Joint Stock Companies' Act,—which, though occasionally expressed with that love of technical crookedness in which lawyers delight, is not an incomprehensible piece of legislation.—I may, therefore, avail myself of your columns to point out, in fearless detail, how grossly this act has been violated, or evaded,—and by the evil advice, too, of the legal worthies, whose enormous charges are paid out of the deposits of deluded shareholders.

THOMAS MULLOCK,  
Late Secretary to the late Direct London and Manchester  
Railway (Remington's line).

London, Nov. 6.

## ON SUBMARINE RAILWAYS.

RESPECTED FRIEND,—I have this morning received a copy of the *Mining Journal* of the 18th ultimo, in which I observe a letter of R. Rottie, C.E., on submarine railways. I would have troubled thee with a few lines before, had not the receipt of the paper been unaccountably delayed. With thy permission, I will make a few remarks on the origin of the scheme. In the early part of 1843, I submitted a plan for joining Dover and Calais, by means of a wrought iron-tunnel, to several individuals in both the islands of Guernsey and Jersey. A few thought well of the scheme; but the greater number pronounced it to be a frightful idea, which it would be impossible to carry out. I inquired in every quarter where I could obtain information, to ascertain if such a plan had ever been published; and every one assured me, with a sardonic smile, that I need not fear having any competitors for the invention: and convinced that, in pursuing the object, I was in no danger of treading on beaten ground, I set, in right earnest, to mature the plan. After nearly one year's application to the subject, I ventured to make the scheme public—a brief description of which was published in the *Jersey Gazette* of the 11th of 3d month, 1844. The whole of the details were not explained at length, as my object was principally to chronicle the invention as mine; while I might continue to perfect it without danger of its being pirated. A few months after, being settled in Liverpool, I submitted the plan and details to the editor of the *Mercury*, who, after perusing it, suggested that I should see Sir Joshua Walsley, and request him to submit it to his friend, George Stephenson, as that engineer would probably give his opinion on the project. (I hope that the editor of the *Mercury* will excuse my stating this fact, on the grounds that I am compelled to do so, to explain the history of the invention.) I readily availed myself of this kind suggestion, and explained the principle of the scheme to Sir Joshua W.; at the same time, giving him a copy of the plan, written on forty pages of letter paper, with drawings, &c. He assured me, that he would not fail to give it to G. S., who was then in Liverpool, and they would probably meet the next day. Satisfied that the plan was in good hands, I pursued the object of modifying the details of the scheme, that the whole might be as perfect as possible before bringing the scheme to notice, as a practical plan. I had expected that G. S. would have favoured me with his opinion on the merits or demerits of the scheme; but many months passed away without my hearing anything on the subject, and I concluded that I must apply in another quarter. I was preparing to do so, when the papers announced, that one of the boldest railway projects of the day was the proposal of George Stephenson to pass the Menai Straits, by means of a wrought iron tube. This scheme was explained at a meeting of the Institution of Civil Engineers, where, to use the words of the *Times*, the principle appeared to be considered sound. As the building was described almost word for word as in my plan, I wrote a few lines to the editor of the *Liverpool Mercury*, and the following article appeared in that paper on the 6th of June last:—"Mr. John De La Haye, of London-road, in this town, is the gentleman who proposed wrought iron tunnels, by which to pass rivers and narrow seas, long before Mr. Stephenson proposed the tunnel over the Menai Straits. Mr. De La Haye's idea, however, was to lay the tunnel on the bed of the water, and not to suspend it, as Mr. Stephenson suggests. We wonder whether the inventor's plan was submitted to the eminent engineer, and whether he adopts it with his own modifications."

I soon found that the frightful project was very well received, particularly among a few individuals, who claimed the invention as their own. One anonymous writer, who did not know the origin of the Menai Straits scheme, proposed that the tunnel should be sunk in the Mersey. Another individual recollected that he had thought of submarine tunnels several months before; and another very candid writer appeared before the public with a scheme for crossing the Mersey, by means of a wrought iron tunnel. He did not pretend to be the inventor of submarine tunnels, but he discovered that which was of far greater importance—the mode of constructing the tunnel, and of placing it in its position. This logic was actually brought to light in the form of an advertisement. The advertiser concluded by giving his name and address in full,—and stating that he would enter into the details of the plan to any person who would carry it out; until then, he would keep the whole secret! The inventor, of course, was sent to make further inventions, for the benefit of the said advertiser. I would not judge a person hastily, without knowing his motives,—but at the time, I confess that I was desperately inclined to suppose, that his motives were of such a nature, as would lead him to sing with Moliere—

"Non corps est moi-même, et j'en veux prendre soin."

R. Rottie says, that he had thought of the same thing several years since; but, if such an assertion was sufficient to claim the invention, he would not still be the inventor. A few months since, I was advised to get the subject under discussion, in one of the scientific societies of Liverpool,—and was referred to one of the members, who might bring the subject forward. I sent a copy of the plan to the individual, who, after perusing it, had his

memory wonderfully refreshed. He recollected that his father had invented an iron tunnel, of six feet diameter, forty years since! I was surprised at this assertion, and asked some particulars about this invention; when he added, that his father's tunnel differed in some respects from mine, as his was intended to let the water in, while mine intended to keep the water out; in short, it was a huge cast iron sewer, partly placed on the bed of the sea; still he thought that his father's invention would form an era in the history of submarine railways. R. Rottie will, therefore, comprehend that, if an assertion of priority of invention was sufficient to establish a right to it, it would soon be found that there is nothing new under the sun. I have no doubt but some traveller will tell us, in a few years, that submarine railways were constructed in China, some 500 years before the flood. R. Rottie says, also, that he sent a letter on the subject, a year since, to the editor of a London paper; but I can assure him, that I never saw it, nor had I ever heard of it, so that I suppose it was never published; but even if it had, it would not affect the matter,—for my plan was in the hands of G. S. long before that period. In this invention, I have not made use of my neighbour's brains; and it will be understood, that it was not till after my plan was made public, that several individuals fell in love with the invention; but if it were only necessary for a person to assert, that he had thought of a plan previous to its being published, to lay claim to an invention, there would be a great number of persons who would turn their memory to some account, by recollecting that they had thought of a particular invention some years before;—so that an inventor might devote several years to mature an invention, merely for the benefit of any person, who would take the trouble of exerting his memory for the occasion—a thing for which the individual would not require a much greater quantity of brains than his neighbours.

I, therefore, claim being the inventor of submarine railways, on the following grounds:—Firstly, because the idea originated with myself, and did not receive any aid by the inventions of others, except it be the Thames Tunnel; but that work differs materially from mine. Secondly, because I believe that I was the first who published the plan, and also the mode of going through the details of the work. I believe that I can appeal to the public, and ask if I am justified in claiming the invention as mine. The press being the organ of the public, I hope that an opinion on the subject will not be withheld.

London-road, Liverpool, 10th mo. 4.

JOHN DE LA HAYE.

## FALMOUTH AND PENZANCE RAILWAY.

Sir,—There is not, I believe, anywhere in Great Britain a piece of ground of equal area, so hotly contended for as a railway theatre, as is at this moment the county of Cornwall—the rich fisheries of its coasts, its unbounded mineral wealth, and the density of its population, may, in a great measure, if not altogether, account for this. Into the merits of the several proposed railways, or the resources of the country, or the capacity of its harbours, it is not my present purpose to enter, but for a moment only to call your attention, and that of your readers, to that snug and well-considered line recently submitted to the public, which is to run from Falmouth—the great county port—along a highly-productive and prosperous district, to Penzance—the beautifully-situated and much-frequented southern *ultima thule* of England. Of the termini it is, I think, needless at this time of day to say much. Falmouth is a port whose capacity as a roadstead, and accessibility as a refuge in all weathers, is daily raising it in the estimation of the merchant navy of England. Penzance, situated in the bosom of a quiet bay, enjoys, from its advanced southern position, a climate more soft, and more unfluctuating; and, at the same time, more tonic, than that of any coast residence on the shores of England; the intervening district is filled up with a dense and an industrious population. I believe the circumstances and prospects of the line place it far above all need of an indirect communication, but having been over the ground, and seen its want of, and adaptation to, a line of rapid traffic and inter-communication, I deem it but just, to say so much in behalf of the district, and of the undertaking, which will furnish it with so manifest an instrument of utility.

London, Nov. 6.

MARTINUS.

## DR. SLEIGH'S PROPOSED NEW MOTIVE POWER.

At a time like the present, when the gigantic powers of the steam-engine are so universally applied to every description of our manufactures, as well to the necessities as the luxuries of life, from the formation of a pin to the wielding the ponderous forge hammer, and the all-important principles of locomotion, any plans, by which this power can be economised, or discoveries, which may actually supersede it, by one less costly, and equally efficacious, becomes a subject of the utmost importance to society at large. Having been informed, that Dr. Sleigh had matured a plan for obtaining an economic motive power by a new application of hydrostatic pressure, we lost no time in our endeavours to obtain a view of the diagrams, which Mr. Andrew Smith, of Princes-street, Leicester-square, engineer, who is constructing the first model, kindly exhibited to us. The principle on which the inventor expects to found a system of power hitherto undiscovered, is the known hydrostatic pressure of water, acting in two perpendicular tubes united at the bottom, and the diagrams, which are the full size of the model, now being made, are as follows:—The tube in which is the descending column of water is fifteen inches in perpendicular height, three-quarters of an inch diameter, and is supplied from a suitable cistern placed above it, this is connected at bottom with another perpendicular tube of the same dimensions, forming together the letter U; on the top part of this latter tube a water-tight cylinder, six inches in diameter, works with a six inch stroke—i.e., with the rising column of water in the tube, the close cylinder, perfectly water-tight, having proper stuffing boxes around the tube, rises six inches; and on opening a valve at the bottom of the tube, and closing the descending column in the other tube, it descends six inches.—This cylinder is horizontal, admitting the tube through an opening in its circumference, beneath which are the stuffing boxes, and at each end is a piston connected by levers and toggle joints to the fixed tube in such a manner that, at the rise or fall of the cylinder, they either contract or expand the space within, which may thus be termed "an expansive cylinder." This is all the explanation which we have as yet been able to obtain, and shall anxiously wait the production of the model; as, although, we are sorry to say anything which would damp the ardour of invention, we cannot see where the power from this apparatus is to be obtained. Dr. Sleigh expects, if we understood rightly, that, by means of this expanding cylinder, lowering or heightening the column of water in proportion to the other arm of the tube, as the space in the cylinder expands or contracts, the power gained will be as the square of the quotient of the diameter of the cylinder, divided by that of the descending tube—viz., if the diameter of the tube be 1, and that of the cylinder 6, 1 lb. applied to the column of water in the tube will give the following result:— $6 \div 1 = 6$ , and  $6 \times 6 = 36$  lbs., the power gained by the rise of the cylinder. We much fear that Dr. Sleigh is stumbling upon the rock on which so many (in other respects) good mechanicians have split—viz., the attempt to create power, forgetful that the laws of Nature are immutable, and that, although the motive power inherent in the elements can be applied in various ways, or transferred, the sources from whence it is derived are the same in all cases, and subject to the laws of the old mechanical axiom, "what we gain in power we lose in time."

The merest tyro in mechanics is aware that, by the laws of hydrostatics, a column of water—say, twenty inches high, and only one inch in diameter—will raise a piston on the surface of another column connected with it, even should it be 100 inches in diameter; yet here it is obvious that, while the greater the difference of the area between the two tubes, and the greater the height of the descending tube, the greater is the power at command—yet, at the same time, the longer time does it take to exercise that power, and, if the water has to be raised to the height necessary for action, it will be found that the power so employed will be just equal to the power gained on the piston, independent of friction—so that, in fact, "you gain a positive loss." It has long been known to engineers, and mechanics generally, that hydrostatic pressure can only be brought into use as an economical motive power, in situations where water exists at great heights above the spot where it is to be put in operation; and here you get an enormous power at no greater expense than the wear and tear, which is small, and attendance. Were this otherwise, and if Dr. Sleigh has discovered a method by which he can pump water to a certain height, and, by allowing it to descend, create an increase of power, the question of perpetual motion is settled for ever. If we are wrong in any points which we have advanced, we shall be most happy to be set right, and shall feel obliged to any of our scientific correspondents for opinions on the subject. Should we in any way have misrepresented the views of Dr. Sleigh, we shall with pleasure insert any reply from that gentleman.

## OXFORD AND SALISBURY DIRECT RAILWAY, VIA AMBINGDON, WANTAGE, JUNGERSFORD, AND LUDGERSHALL.

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Covent-garden  
Oxford—The London and County Bank  
Salisbury—The Wills and Dorset County Bank  
Aldington—Messrs. Henry Knapp and Co. and the County Bank  
Wantage—Messrs. Henry Knapp and Co.  
Newbury—The Berkshire Union Bank  
Jungersford—Messrs. Tanser and Pinckney  
LOCAL AGENTS.  
Oxford: John Francis Wilde, Esq.—Salisbury: Stephen Hill, Esq.—Aldington: Messrs. Graham and Son—Wantage: William Ormond, Esq.—Jungersford and Marlborough: John Holcomb, Esq.  
SECRETARY—Z. Hubbersty, Esq.

The committee of management give notice that they are now proceeding with the allotment of the shares in this company, and only await the completion of the survey to issue the letters to the public. The committee have much satisfaction in adding that, in the course of the progress, their engineers have found that the construction of the proposed railway will be attended with much less expense than he at first anticipated, and that he has received throughout the most unqualified support and assistance from the principal landowners on the line.

By order of the committee,  
Z. HUBBERSTY, Secretary.

## NEWCASTLE-UPON-TYNE, EDINBURGH, AND (DIRECT) GLASGOW JUNCTION RAILWAY.

WITH A BRANCH BY THE NORTH TYNE TO HEXHAM.  
Capital £1,500,000, in 75,000 shares, of £20 each.—Deposit £2 2s. per share.  
Provisionally Registered, pursuant to 7 and 8 Vic., cap. 110.

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(With power to add to their number.)  
BANKERS.  
Newcastle-upon-Tyne—The Northumberland and Durham District Bank.  
London—Messrs. Glyn and Co.  
LOCAL ENGINEERS—Messrs. John and Benjamin Green.  
LOCAL SOLICITORS—Mr. John Brown, and Messrs. Laws & Glynn, Newcastle-upon-Tyne.  
LONDON SOLICITORS—Messrs. Fritchard and Collette, 37, Lincoln's Inn-fields.  
PARLIAMENTARY AGENTS—Messrs. Spottiswoode and Robertson, 61, George-st., London.  
This railway is intended, by means of a junction with the Edinburgh and Hawick and the Caledonian extension lines, to form a direct communication between Newcastle and Edinburgh and Glasgow. Starting from Newcastle and North Shields Railway station at Newcastle, the main line will proceed northward by Collieston, and thence, by nearly a straight line, in the direction of Fastland and Belsay, by Lisleburn to the intended docks at Goble Head. The union which has just been effected between the North Tyne and the Newcastle, Hawick, Edinburgh and Glasgow Junction Companies, gives to the united company the maintenance and support of nearly the whole of the landed proprietors as well as of the owners and lessees of the extensive coal-fields and iron-works in the districts through which the proposed lines will pass.

Amongst the various sources of revenue which will accrue to the proposed line, the following may be briefly adverted to:—facilities will be afforded for the transit of lime and manure to, and of agricultural produce from, the extensive and valuable districts of Northumberland, stretching in a north-westerly direction from Newcastle to the Scottish Border, and the fertile counties of Roxburgh, Selkirk, Peebles, and Lanark; whilst the transport of live stock from the same districts will be in an especial degree facilitated by this line, since the roads, used for generations by the Scottish drovers, will be in immediate contact with it for a considerable portion of its length.

The supply of coal to the populous manufacturing districts of Scotland, including the towns of Hawick, Jedburgh, Kelso, Melrose, Galashiels, Peebles, Lanark, &c., has become an urgent necessity; and the proposed line, proceeding as it does from the extensive coal-fields the north-eastern portion of Northumberland, and through the hitherto unapproachable seams of coal up the course of the River, will become the principal means of supplying it, and thus derive an abundant source of revenue from its transit: as a proof of which, coals are at present shipping in considerable quantities from Newcastle to Glasgow, through the Caledonian Canal, at heavy tonnage rates, far exceeding the cost of transit by the proposed line, through the entire distance from Newcastle to Glasgow.

An important feature presented by this undertaking is the development which will thereby be afforded of extensive beds of minerals in the districts of the North Tyne and Reed, especially of limestone and ironstone—the latter of great richness and superiority, for the manufacture of which extensive works are now in operation at Harshaw and Riddale; and others are projected and in course of erection—the entire produce of which would be conveyed by the proposed line to Newcastle for consumption and shipment.

By means of this line the Tyne will become the most expeditious and economical place of shipment for all that portion of the manufactures of Glasgow and the other manufacturing towns before-mentioned, intended for the eastern coast of England and the northern ports of Europe.

Lastly—The passenger traffic between the towns on the western side of Scotland, and the eastern and middle portions of England, added to the great local and general traffic on the several parts of the line, will form a large and constantly increasing item of return—always aided by the consideration, that the line laid down for this railway will shorten the distance from the western and many other parts of Scotland, to all the eastern portions of England, by not less than thirty miles.

From these united sources will flow an amount of income that will abundantly compensate the shareholders for the outlay upon the line.

A survey is rapidly proceeding, which the committee are assured by the engineers will be completed in time to deposit the requisite plans and to enable them to obtain an Act in the next session of Parliament, for, at least that part of the line which will lay open a very considerable portion of the agricultural and mineral wealth which will form so important a feature in the general value of the undertaking.

The subscribers will be held liable only to the amount of their subscriptions, and power will be taken in the Act of Parliament to allow interest at the rate of 4 per cent. per annum on all calls from the passing of the Act.  
Applications for prospectuses and shares to be made to the solicitors, and to the following brokers:—Messrs. Tucker, Barnett, and Ellis, 11, Birtchin-lane, London; Messrs. Warburton and Co., Central Exchange, Market-street, Newcastle-upon-Tyne; Robert Allan, Esq., and Messrs. Pillans and Home, Edinburgh; Messrs. Mele and Cunningham, Glasgow; Messrs. William Reynolds and Sons, and Messrs. D. and J. B. Neilson, Liverpool; Messrs. Alop and Son, Hull; Messrs. Beaumont and Williamson, Leeds; Messrs. Robertson and Bales, and Messrs. Thomas Cardwell and Sons, Manchester; Mr. J. H. Lane, Birmingham; Messrs. Walsley, Woodhead, and Co., Bradford; Messrs. Low and Tansel, Bristol; Messrs. Wm. Moore and Co., Huddersfield; Mr. J. N. Balme, Gloucester; Messrs. Warburton and Croeland, Sheffield; Messrs. Helliwell and Davis, Halifax; Mr. T. C. Maynard, Durham; Messrs. Hills and Allison, and Mr. W. L. Baker, Sunderland; Mr. Wm. Davidson, Alwinton; Mr. T. Glover, South Shields; Mr. John Hurd, Louth; Mr. J. Nelson, Settle; Mr. John Sturrock, jun., Dundee; Mr. James Reid, Perth.

FORM OF APPLICATION FOR SHARES.  
To the Provisional Committee of the Newcastle-upon-Tyne, Edinburgh, and (Direct) Glasgow Junction Railway, with a Branch by the North Tyne to Hexham.

Gentlemen,—I request that you will allot to me \_\_\_\_\_ shares, of £20 each, in this company, and I undertake to accept the same, and to pay the deposits of £2 2s. per share thereon, or upon any less number that may be allotted to me; and I also undertake to execute the Parliamentary contract and subscribers agreement when required.

Reference to \_\_\_\_\_ Name in full \_\_\_\_\_  
Residence \_\_\_\_\_  
Address of office \_\_\_\_\_  
Trade or profession (if any) \_\_\_\_\_  
Date of application \_\_\_\_\_ Place of business \_\_\_\_\_



# **GREAT BRITAIN MUTUAL LIFE ASSURANCE SOCIETY, 14, WATERLOO-PLACE, LONDON.**

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 Thus £1000 may be assured at the age of 30 by the annual payment of £10 10s. 10d. for the first five years.

The whole of the profits divided ANNUALLY among the members, after payment of five annual premiums.  
 An ample guaranteed capital, in addition to the fund continually accumulating from premiums, fully sufficient to afford complete security to the policy-holders.  
 Members assured to the extent of £1000 entitled (after payment of five annual premiums) to attend and vote at all general meetings, which will have the superintendence and control of the funds and affairs of the society.  
 Full particulars are detailed in the prospectus, which, with every requisite information, may be obtained by application to **A. R. IRVINE, Managing Director.**

## **EUROPEAN LIFE INSURANCE AND ANNUITY COMPANY.**

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This OLD ESTABLISHED SOCIETY has recently received ADDITIONAL POWERS, by Special Act of Parliament, and affords FACILITIES in effecting INSURANCES to suit the views of every class of insurers.

PREMIUMS are received yearly, half-yearly, or quarterly, or upon an increasing or decreasing scale.  
 Two-thirds of the profits are added semi-annually to the policies of those insured for life one-third is added to the guarantee fund for securing payment of the policies of all insurers.  
 The LAST BONUS under this provision was declared on the 27th day of June, 1845, being an additional bonus of 10 per cent. on all the premiums paid by the holders of policies of insurance for the whole term of life, with corresponding additions to holders of policies of endowment.

Those who are insured to the amount of £500 and upwards for the whole term of life, are admitted to vote at the half-yearly general meetings of the proprietors.  
**DAVID FOGGO, Secretary.**

## **THE MINING JOURNAL** **And Atmospheric Railway Gazette.**

LONDON, NOVEMBER 8, 1845.

\* \* We should feel particularly obliged by correspondents being careful in legibly addressing their communications—to the Editor, at the Office, 26, Fleet-street, London—several letters having lately miscarried, and their contents, consequently, been unattended to.

Notwithstanding the re-action and dullness in the share market, the price of iron has remained firm during the week, and with all their scheming, speculators for a fall have been unable to drive down prices—in fact, we think, "Othello's occupation's gone"—for the ironmasters begin to see clearly through the various schemes resorted to, for the purpose of influencing the market, and producing unfavourable results of which they may take advantage, and are, therefore, extremely cautious how they pay attention to rumours and reports generally set on foot by jobbers and speculators. Full of orders, which, upon an average will take the large houses twelve months to execute, they remain firm; and though, notwithstanding, in addition to the home trade, many export orders have come in, the price has not advanced; there has not even been a tendency to a decline. Scotch pig has sold at from 80s. to 83s., and in some few cases as high as 85s.; the average quotation may, however, be taken at 83s.; Welsh pig from 105s. to 115s.; railway bars, &c., 117. to 122.; and common bar in Wales, 97. to 97. 10s.: some houses refusing orders at these figures. From the tight state of the money market, and the high price of provisions, it is expected prices will vary but little between the present period and the close of the year. It is calculated that 2,000,000 tons of railway iron will be required for undertakings which are already commenced, or which are pretty certain of being sanctioned, exclusive of orders for exportation to France, Belgium, &c. In the neighbourhood of all the iron works, all is activity and plenty.

It is, unhappily, no rare thing, when persons have become committed to a course of error, or involved in a labyrinth of misrepresentation, to adhere stubbornly to both, rather than incur (what they would consider) the inconsistency of an amendment. Having so far forded the filthy river, they reckon it better, safer, and easier, to go over than to go back. In this odd pickle, and odious predicament, at this moment is the *Times* journal—in respect of the great railway question; having got into the middle of the stream, where the footing is roughest, and the current strongest, it looks wishfully on the flowery margin it has left, and fearfully at the precipices that frown on the opposite bank—feeling that it cannot now reach either, without a grievous abatement of strength, or a melancholy loss of reputation. The polemical heat of this journal was always tolerably intense. It has recently become intolerably expansive also; tilting at every target, and making itself a universal Hector. It has launched its darts at the railway movement as a whole—at railway promoters *en masse*. Had the journal in question exercised a little prudence in the selection of its victims—had it broken this bubble, or that, if such could be found in the market—it would for once have done good public service; but it sprang into the ring, and flung up its hat, with a countenance and a gesture that meant mischief, and mischief only, and indiscriminately. The force of its artillery, if cautiously served, would have cleared the railway region, and warned tricksters and time-servers of their danger—those, in fact, who had not strength to fight, would have found time to fly; but that would have been too considerate a course for the *Times*. The rapidity and the depth of its circular fire—the encompassing form of its fusillade—was intended, not for a monition, but a massacre. Its animus and intention is to us clearly apparent, and its pathway has not to our mind so much as that plausible pavement, which is said to distinguish another place. If, indeed, the *Times*, in its *furor* against railways, had said that the enthusiasm in their favour had produced the short yield of the harvest—if, instead of stating these circumstances as being collateral and contemporaneous, it had laid them down, in the relation of cause and effect—we should not have greatly wondered at the affirmation, knowing that from the improbable to the impossible is but a step.

However, the tide is already turning: in the share market doubt is giving place to confidence, and supineness to activity. Prices, if not better, are steadier, and tending to an upward movement. After the temporary flutter, caused by the strong statements of an unscrupulous journal, the public has looked calmly on the amount of its railway responsibilities, and finds that it has amply provided for them. The season of storms, if not the region of storms, is absolutely passed for this year. Some uncertainty as to the abundance, and consequently as to the value, of money, must exist until the course which Government may adopt, as to the food of the people, is fully known; but, we repeat it, our railway liabilities for the next twelve months are, to the last farthing, provided for. In so great a mestic enterprise, which will more largely affect the material comfort and social convenience of this entire kingdom, than any other measure of modern times, it is of all things important, that it be well and cautiously conducted. But boldness is as just and as necessary an element of every great undertaking, as is circumspection; and we are quite as likely to miss our way from a want of spirit, as from

a want of prudence. We should, therefore, quicken our pace. The peace of Europe exhibits no present sign of an approaching interruption: there is no external danger claiming the national energy, no external necessity requiring the national wealth. In a profound peace, we would profoundly cultivate the arts that belong to that era. But depend upon it, the first hostile flag that emerges from your southern horizon—the first shot denoting the presence of a foe in the waters of the English Channel—will shut up and seal the volume of those arts for a series of Olympiads.

In another column of the *MINING JOURNAL* we give a few remarks on the mineral resources of Algeria, and the determination, on the part of the French Government, not only to improve, but to keep possession of, their dearly bought conquest. As we have previously remarked, France has done a great deal to civilise that portion of northern Africa; but whether it will ever be a productive colony, either for emigration or mining pursuits, is a matter of great doubt,—but certainly not one that will ever be in favour with the army, who look upon the country and climate nothing more than banishment from home and friends. M. Amedée Burat, professor of the Central School of Arts and Manufactures, who had been appointed as a member of a commission to make a minute mineralogical research in Algeria, as to her mineral resources, and the prospects or advantages this new colony offers to French enterprise and industry—has presented an interesting memoir on the subject to the Royal Institute of Paris. This clever mining engineer states in his report, that, if the mines in Algeria are worked in a suitable manner, and with prudence, they may probably become a source of great wealth and prosperity. It is, therefore, important that science, without attending to the exaggerations of interested speculators and money-making adventurers, should pronounce itself on their intrinsic value. He gives some very interesting details on the greater portion of the mines which have been discovered in the environs of Tenez, and in the territory of Monzaïas. The geological predominance of the beds in these two localities, is in forming perfect regular veins. The character and structure of their composition recalls to mind, very frequently, the classical veins of Germany, in the modern earths or stratum. The copper ores, and the sphatose carbonated iron ores, are the most interesting elements of these veins or lodes,—as they present, in a scientific point of view, various interesting peculiarities. Their nature becomes modified, according to the more or less solid description of the earth that encloses them, as they are congregated in compact rocks, and divided by argillaceous earths. They present extraordinary examples of a glassy or crystalline nature,—and the blocks, in detaching themselves, roll down into the torrents, carrying with them the traces of the ancient movements of the soil, which geologists have so often endeavoured to account for. This mineralogical research of Algeria, made by M. Burat, has created a very great interest in the scientific circles in Paris; and, according to the expressions of M. Arago, "it is hoped that this land of Africa, so fecundant with the blood of France, would yield some day the men and gold which it has annually drained from her, by a powerful and certain colonisation, which will allow us to put into practice the information of science." M. Arago, and many other eminent men, look upon Algeria as offering a wide field for mining operations, and French colonisation; but the majority of the Paris journals view it in quite a different light, and assert that it will never be the country that speculation or national enterprise will venture to embark their capital and industry in, exposed (as they would be) to an unhealthy climate, and the constant incursions of the Arabs. We shall allude to the subject at a future period, when the report has been printed by order of the French Government, as there will be some interesting information on the subject to the mining interest in this country.

The great demand that has been made within the last few years in this country, as well as on the continent of Europe and our transatlantic colonies, in the West Indies, and also in South America, not only for galvanised iron, but particularly zinc, which has been so successfully introduced and adopted for the covering of houses, warehouses, railway termini, and the making of nearly every description of utensils and articles, also in the coating of iron ore, has created a stimulative enterprise in working this very useful ore. It is with pleasure we notice the report of the Nouvelle Montagne Mining Company for the year 1844-45, which appears in another part of our Journal, as it is highly satisfactory, and shows that the society are in possession of extensive mineral property that only requires working to render the undertaking a most lucrative speculation. From scientific researches which have been made, there is very little doubt that the works and operations at Engis, Prayon, and Verviers, are of a character to furnish for many years an annual produce of about 4000 tons of zinc, and 2000 tons of lead, which will yield to the company, at the present price of both these metals in England and France, a net annual profit of more than 50 per cent. on its capital. Since the year 1840, up to 1844, the total produce of zinc has been successively increased, till in the latter year it reached 10,000 tons. The employment of zinc has been, and will be, for some considerable time to come, on the advance; the exportation to India, for example, in 1843, did not exceed 2900 tons; and in 1844, it had risen to more than 4800—whilst, in the present year, it has increased in a considerable degree. In Paris, and throughout France, it is becoming generally adopted for the roofing of houses instead of slates and tiles.

[FROM A CORRESPONDENT.]

The state of the iron trade in this country is attracting the most serious attention of the ironmasters in France and Belgium. The demand for this metal is certainly rapidly on the increase throughout the United Kingdom for railways, machinery, shipbuilding, warehouses, &c.; and the price has, consequently, augmented more than 35 to 40 per cent. within the last few years; this branch of industry being chiefly confined or monopolised in the hands of a small number of the extensive ironmasters of Wales, Staffordshire, and the north. This evil will work its own downfall at last, as enterprising parties will no doubt come forward by degrees, as the price or scarcity increases, to work the abundance of iron ore that exists in this country, so as to place the trade in a more healthy state than it is at present in the hands of the money-making few. We are glad to hear that a number of new furnaces are being erected in different parts of the country, and that a new stimulus is rising in our mining districts to carry on operations on an extensive scale, which will not only be the means of giving employment to many hundreds of industrious workmen and their families, but create a re-action in the market, which will not only be highly beneficial to the speculative adventurers, but to railway contractors and the public at large. England, of all other countries, is the most copiously supplied with every requisite materials for supplying this important and necessary article for her commercial welfare and prosperity; she abounds in coal, and one great advantage is, that the ore is nearly on the spot to be melted, without incurring those heavy carriage expenses, which has hitherto been so great a drawback to mining operations on the continent of Europe, but particularly in the southern hemisphere.

We have, in former Numbers of the *MINING JOURNAL*, given it as our opinion that France will ultimately be obliged to import a large quantity of her iron rails, machinery, &c., from this country, to carry out the great railway speculations now being undertaken, and likely to be passed during the next session of the Chambers; as, from official documents, it is substantially proved that her iron and coal trades are quite inadequate to meet the demand, and although some of the Paris journals are opposed to the idea, that the Govern-

ment will make a material reduction on the importation of British iron, and particularly coal, as being detrimental to the mining interest of France, there is not the slightest doubt that such will ultimately be the case, or the railway directors will be retarded for years in the accomplishment of their lines. We are aware of the jealous feeling that exists among our Gallic friends on the opposite side of the Channel towards British inventions and industry, whether manufacturing or mining, but, with all their exertions to compete with us, still they are reluctantly necessitated to come to our markets for the chief portion of their materials, be it iron, steel, coal, machinery, &c. We, however, translate the following from the *Journal des Travaux Publics*, as a proof of what we have above stated, that they will not admit the depressed state of their iron and coal districts. We are fully aware that France possesses some very valuable and extensive iron mines, as well as seams of coal, which are certainly of a rather inferior quality generally; but she has not the facilities of working them as we have in this country, which, consequently, places her among the last of the mining nations of northern Europe, as the exorbitant charges for conveyance from one point to the other more than exceeds by one-third the working of her mines and pits. "Some persons," states the Editor of the above quoted journal, "represent that our metallurgic industry is not sufficient to meet the demand for the railways, and that for shipbuilding, and other purposes—we can allay their fears by commencing with the north. The groups of forges that have recently been established in the vicinity of the coal beds in the north, are beginning daily to develop themselves, and which will no doubt increase according to the demand. There are at present eight large forges or furnaces. The three establishments of Maubeuge, Hautmont, and Crespin, erected in 1844, being able alone to produce 10,000,000 kil. of iron; those of Denain, Anzin, Raimes, and Trith, have greatly increased their manufacture. The low price of coal, and the facility of communication in this district, renders it one of the most flourishing. In the north-east, the group of the Ardennes, and that of the Moselle, possess immense resources, and which the new means of conveyance will enable them to procure mineral fuel at a lower rate. The metallurgic ores in this part of the country are very good and abundant. A railway will convey us coals from Belgium to the department of the Ardennes at a low price: another railway will unite the forges of the Moselle with the coal beds of Saarbrück: so that, with these facilities, there is no doubt that a new impetus will be given. The department of the Moselle is one of those in which the manufacture of iron has made the greatest progress, and nowhere has it been more improved than in the fine establishments of Hayange and Moyeuvre. The province of Champagne and the adjacent country are seeing their industry undergoing a new transformation, which will, as a matter of course, increase very extensively their production. The forges and furnaces badly situated are now disappearing, and the manufacture of iron is centralising itself in the large establishments. One will be able to form an idea of the advantages of this revolution, when it is stated that the general expenses, which amount on an average from 50 f. to 60 f. per ton in the small forges, are barely 10 f. in those of the grand centre of manufacture. The extensive forges of the centre and the south, which have acquired so much importance lately, can be easily greatly increased, which no doubt will be the case, and they will extend as the demands may require, as their means of production may be considered inexhaustible. Another group of manufacture has been established in the rich coal basin of Commentry. A very large iron factory has been erected in the ancient manufactory of looking-glasses, which is to be composed of six high furnaces, and of a forge suitable for the treating of the enormous quantity of cast metal which would be produced; two high furnaces are already constructed. This is a metallurgic centre which has but recently opened itself, and has rapidly displayed its resources. The development that has taken place in the working of the coal basin of Commentry, the opening of the canal of Berry, and the improved means of transport, promise a new era in the manufactures of Berry, which have a long time been stationary; the high furnaces of Bourges, Vierzon, all those in the valley of Anbois, dependent on Fourchambault, and many others at the present day, mix coke with charcoal. Nearly all the important factories have puddling ovens, by which means the mineral fuel can join with the ore, greatly improving its quality, and giving to it a new nature. We have already signalled the remarkable aggrandisement which the establishment of Creuzot has undergone. This establishment, which only produced 3500 tons in 1837, can at present send forth 15,000 tons, and even 18,000 tons, if necessary. If it has thus been able to quintuple its produce in eight years, it may be justly concluded that there will be no obstruction in increasing it should the consumption require. The factories of the Loire, which have undergone many vicissitudes, have only been stopped in consequence of the difficulty of procuring ores. Situated in the middle of the richest coal basin, they found, however, in the same stratum, nothing but a quantity of insignificant ore. The Ardeche, Ain, and Upper Saone, which furnished it the primitive matter that was wanting, has afforded it the means of taking an important place in our productions. At the present day, there having been several new lodes of ore recently discovered of great richness, they will open a fine field for the future. The establishment of Decazeville, founded on such vast proportions, comprises six high furnaces contiguous to an immense forge, putting in motion a steam force equal to 600-horse power, producing annually 15,000 to 18,000 tons of iron; as it draws from its own soil its coal and ore, nothing is likely to prevent it doubling both its material and production when required. The furnaces of Alais, after having had many difficulties to encounter, the same as the above, have re-commenced on a large scale—its four high furnaces and excellent forge are in full activity, drawing their fuel and ores from the spot the same as the other. Corsica, with its extensive forests, promises a new centre of metallurgic production. A high furnace, recently established at Bastia, for the treating of the ores of the island of Elba, have been put in full blast in the course of 1844, and which have equalled those of Tuscany, which use the same ore. In Algeria great attempts are also making to carry on mining enterprise. There is, therefore, no want of materials for carrying on operations on a large scale, having the resources we have; but it is confidence and security among each other, without which our mining interest will never flourish."

The mining speculations in France are carried on on a very limited scale; and, although our contemporary has made so cheering a description of its resources, it is a well known fact, that it will be years to come before it can produce a sufficient supply to meet the trade. The *Boulogne News* very justly remarks, "that there is a great opposition to the importation of British iron into France: as General CUNIERES moved in the Chamber of Peers, in May last, that Swedish iron should be admitted into France at a reduced duty of 20 francs per ton in French vessels, and 100 fr. per ton in foreign vessels, which motion was negatived. But, as to the duty on coals, that stands in another predicament. As this is but the fuel for the manufacture, not the manufacture itself, it can never injure the native manufactures of a country to import it, either at a low duty or entirely free. On the contrary, supposing a country to be without coal, it would be the duty of Government to hold out a bounty on its importation, rather than inflict a tax upon it. Cheap fuel will produce cheap goods. Now, it is true, that France has coal in abundance, but it is generally not such as is most suitable for some manufactures—iron, for instance—and it is desirable, therefore, to import principally from England this article, which there abounds in such immense fields, and of all qualities; and, more especially, the small coal, so useful for cooking, and employed in so many ways by the artisan. In England this article of small coal is the veriest drug. If, therefore, the French Government should reduce, or abolish, the customs on



large, but, especially, small coal, nothing would be more really advantageous to both countries. The masses of small coal accumulating in the north of England may be imported into all the ports of France from Dunkerque to Bordeaux, to the great advantage of those ports and provinces connected with them, and to the manufacturing and railway interest of France; while the coal fields of Northumberland and Durham would be delivered of an unprofitable mass, the shipping interest of both countries would be brought into most profitable activity, and the public would begin to have what, it is said, they are here beginning to demand—cheap iron.

This session in France will decide the question; in the meantime, let not the British ironmasters, and enterprising speculators, be inactive, in carrying on their operations on a larger scale, as France, Spain, Portugal, and Italy must have recourse to this country to carry out their railway projects.

The report of the Tincroft meeting, held on Thursday last, for the purpose of taking the opinion of the adventurers as to the policy of adding South Dolcoath Mine to the Tincroft, and working as one company, will be read with interest, as testifying (and we wish similar proceedings were of more frequent occurrence) to a liberality and single-mindedness, on the part of the directors, which does them infinite credit, holds out an example which it would be well for other boards to follow, and which would go far to raise that public confidence in mining adventure, which has been, unhappily, so long on the wane. It appears that, by the constitution of the Tincroft Company the directors have the privilege, or power, to take, add to, and work, any other sett which may adjoin, or be contiguous to, it—South Dolcoath, an adjoining sett, being at liberty, the directors, eighteen months ago, secured leases for twenty-one years, and, at their own individual expense, had gone on completing all preliminary works, necessary for the spirited working of the mine. Although they had the power of charging all these outgoings in the Tincroft accounts, and working both setts as under one company, they preferred taking all the risk to themselves, and, having proceeded to a sufficient depth to ascertain that the mine was of a most promising character, and gone to the expense of setting up a steam-engine, they then come forward and offer the mine to the adventurers at large. Here, at all events, there has been no underhand work, in obtaining a promising sett in the name of the body of adventurers, and then retaining it for their own emolument, as in a somewhat recent case which we could mention; but, looking at the circumstances in every light, whether as to their having had the power to join it to Tincroft at once, or their undoubted right to bring it into the market as an independent company, and thereby reaping an equivalent advantage, we do think the whole transaction reflects credit on the directors, and most justly entitles them to the warm eulogium which was passed upon them at the close of the meeting.

It augurs well for the future welfare of Ireland that a confidence before unknown is about being placed in her resources: her extensive mineral wealth, hitherto so completely neglected, bids fair soon to be explored, and to carry rejoicing and plenty into the heart of many a beggared district. The establishment of railways in every county of Ireland has paved the way for investment in other sources of wealth, which Nature has so bountifully placed at man's command in this favoured island. More particularly has the mineral districts of the counties of Cork and Kerry, in the south and south-west of Ireland, engaged the attention of capitalists, who now consider that, with a full tide of employment for the population setting in, for the construction of the several projected railways, agitation and riot will cease, and property be as safe and productive there, as in England or elsewhere. Among other undertakings of a like nature, it gives us pleasure to notice two new companies, formed exclusively for working the mines of Ireland, for aiding in the development of her rich mines of lead, copper, coal, iron, and other minerals, and her extensive quarries of the most beautiful marbles, slates, &c. One of these—the Southern and Western Mining Company of Ireland, which came out as the West Carbery and County of Cork Mining Company—is formed more particularly for working the rich and very extensive mineral districts of the counties of Cork and Kerry, which have occasionally been partially worked, and again given up in despair, from a variety of causes, the leading and principal of which have been want of capital and confidence. Sufficient has, however, been done, and ample ground explored, to convince the geologist that the whole south-western promontory of Ireland is a mass of mineral wealth, which requires only capital, confidence, and perseverance, to realise a return equal to any mining locality on the face of the globe. The capital of this company is to be 200,000£. The proximity to the sea of the principal mines in this district, allow the ores to be shipped, as well as materials to be landed, at the least possible expense, and avoiding the cost of inland carriage; while the elevation of lodes above the cliffs, sometimes 100 fathoms or upwards, enables the mines to be effectually worked without expensive machinery. The other company—the General Mining Company for Ireland—is formed on more general principles, and with a capital of 250,000£, proposes to work mines and quarries in Ireland wherever they can be obtained on advantageous terms. They will thus avail themselves of all the advantages of those mines which can be made available on the coast, and also secure promising mines inland, as well as quarries of marble, &c., which will, by the construction of the numerous railways already projected, have the great advantage of certain, direct, and rapid communication with the shipping ports, and will place them in a situation as to economical working not much behind those on the coast. Property in mines can be promptly secured in the most favoured localities, and on terms which will secure a large return to the shareholders; and by the establishment of such companies—numbering among their members several of the most influential noblemen and gentlemen in Ireland, some of them eminent in scientific pursuits, and with a large capital at command—we may look forward to the profitable development of much of the mineral wealth of Ireland, which would else probably have lain dormant for centuries—to the opening up a wide field for labour, in addition to all that will be required in the formation of railways—and to the establishment of permanent works, which will materially add to the commercial prosperity of the kingdom, and to the individual advantage of its inhabitants. The establishment of two companies simultaneously, with bona fide capitals, amounting to nearly half a million sterling, for the working of mines, is at the present time a novel feature in the statistics of Ireland,—and we hope they will meet with that success which the liberal spirit of enterprise displayed demands, and spread comfort and plenty in every district where they may locate themselves.

One of the greatest benefits that railways have conferred in this country, is not only a quick and cheap transit to the public, compared with days gone by, but the grand opening that has made to our commercial, manufacturing, and particularly mining industry, which formerly was labouring under many delays and oppressive exactions, by an enormous monopolised charge of land, and even water, carriage for the conveyance of their wrought material to the most advantageous markets. Railways have created a new stimulus to the commercial capitalist, not only in the United Kingdom, but Ireland, for the constructing of harbours and docks in points that had been hitherto completely buried in a state of obscurity. To the mining enterprise of England, Wales, Scotland, and Ireland, not only the metallic, but the mineral or coal trade, the establishing of good lines from one end of the country to the other, will be the means of increasing, to a very great extent, our commercial prosperity, not only inland, but affording these facilities for export

tation which have been so long a desideratum. Southampton, which twenty years ago was only looked upon as a small unimportant harbour, is now becoming one of the most prosperous seaports in England, by having been made the packet station for the Peninsula, Mediterranean, Oriental, and West India royal mail steam-packets, and Channel Islands—Guernsey, Jersey, &c.—also to and from Havre and Dieppe. Extensive docks and warehouses are being perfected for the convenience of shipbuilding and bonding of foreign produce (by permission of Government), so that in a few years hence Southampton will figure among our great commercial ports. The same may be said of Folkestone, which, but a few years back, was nothing but a small hamlet for fishermen—is now, through the progress of railways and steam navigation enterprise, becoming an important harbour in the Channel, for our communication with France, via Boulogne. The inhabitants of Dover, Yarmouth, Harwich, and other ports to the northward, all feel the advantages of railway transit. We will now allude to the benefits that the Wear Dock and Mineral Railway will confer to the port of Sunderland. The want of adequate accommodation for the increasing trade of the port of Sunderland has for many years been loudly complained of; it was not only the want of harbour room that was felt, but the means of conveying to the port coals and other merchandise from the distant parts of the country that were wanting, and the gradual diversion to Seaham Harbour and Hartlepool of a great portion of the traffic that naturally belonged to Sunderland. The spirit of railway enterprise and general improvement has given rise to the project of a dock, which will provide accommodation for the extensive shipping belonging and trading to the port, and by a railway, which will materially increase the communication between all parts of the county. But, although more than three times the amount of capital has been subscribed to carry out to the fullest extent the objects of the promoters, yet another and independent scheme for a south dock at Sunderland has been commenced, and the Wear Dock and Railway committee, to avoid any injurious rivalry, have abandoned that part of their plan which relates to a construction of a dock, and will confine themselves to the formation of a railway, which they will bring down to the dock proposed to be formed, so as to unite all parties in one interest. This is as it ought to be, and we have no doubt that the advantages that this undertaking will bestow upon the Durham coal trade, will ere long, induce the great coalowners to abandon their private railways, for which they pay enormous way-leave rents, and their present shipping berths, which cost immense sums annually in dredging, and run down their coals by public railway for shipment in the dock. There is little doubt but that the speculation will prove a profitable one, not only to those interested in the company, but an advantage to the coal interest in that part of the kingdom.

#### THE MINES OF IRELAND.

In a former Number we enumerated the several kinds of metals which were produced from mines in Ireland, from the reign of Elizabeth to that of Charles I. inclusive. Strictly speaking, there was, during Elizabeth's reign—which, in respect to Ireland, was a troublesome one—the petty princes or chieftains of that kingdom, having, throughout the greater part of it been engaged in a series of struggles to free themselves from British control, but little, if any, effort was made to develop its resources, mineral or otherwise. It was not until her successor, James, had abolished the old Irish customs which supplied the place of laws, and substituted English law in their place, and had, by a course of policy as determined as it was wise, produced comparative tranquillity throughout the country, that it was considered by the English as a field for enterprise. James having taken all the natives under his protection, and declared them free citizens, established a regular system of Government; and the province of Ulster having fallen into the possession of the Crown, by the attainder of rebels—as the natives who had long and desperately struggled to cast off their subjection to English domination, were pronounced to be—the King granted a large portion of it to a company which was, at his own desire and instigation, established in London for planting new colonies, and spreading the Protestant religion, and, by the introduction of husbandry and the arts, civilising the country. English and Scotch husbandmen and artisans flocked, under the auspices of this company, to that province, and from them, in the course of time, the natives acquired a knowledge of husbandry and the arts, and with it habits of industry and obedience to the laws. Then did the superior advantages of Ireland, in climate, soil, and all other natural resources, begin to be developed; and, as we said before, the mines which were known to exist were explored, and in the reign of Charles I. worked with the success stated by Lord Stafford in his communications to the then Secretary of State. The argentine lead mines, in the province of Munster, were worked by the Crown, and, indeed, all the mines then discovered were denominated the "Royal mines of Ireland." We have, in our notice of last week, already described these mines, and the relative produce in those days. The English company above alluded to had granted to them, in their Charter of Incorporation and Grant, all mines, minerals, &c., within their territory; and in all subsequent grants, whether to English settlers or native proprietors, a similar property in mines, &c., was given by the Crown. In truth, almost all the landed proprietors in the kingdom were compelled to resign their estates into the hands of James I., who re-granted them to such as were deemed loyal to the English crown, or who had submitted to it, and made an acceptable profession of such loyalty; still, the want of enterprise, or rather the want of common industry, on the part of the native proprietors of the southern provinces, left their mineral wealth unexplored, though they all had traditions, and many of them proofs, of its abundant existence in their several districts. All the old Irish historians assert that gold mines were worked in Ireland in a very early age, and they adduce as a proof the authentic fact that gold and silver money was coined in that country anterior to the introduction of Christianity there. In earlier times, as it appears, payments were made in gold and silver by the weight, and these payments are frequently alluded to by the ancient Irish historians. Many of the coins of the ancient monarchs of Ireland are still preserved in the cabinets of the curious. English historians ascribe to the Danes the introduction of money there, but all authentic Irish history is opposed to this assumption; at the same time that it is still doubtful that gold was at any period produced from mines in Ireland. Of the other metals we have ample proof that there is an abundance. In thus referring to the mineral wealth of Ireland, as developed in former times, we did not propose to give a detailed history of progress of such development, but rather to show that in all times since the submission of that country to the Government of England, the possession by it of that wealth was well known to the English settlers and the Government; and that, owing to the turbulence of these times, and the difficulty of keeping the natives in subjection, together with the slow progress of the arts which demanded the use and application of the less precious metals, the then discovered mines were very partially or imperfectly worked; to these causes must, of course, be added the difficulty of access to, or conveyance from, them; we find, however, that about the middle of the seventeenth century there was, for the time, and under the circumstances, a comparatively very considerable progress made in working some of them (particularly the argentine lead and the iron mines); and in the beginning of the last century some very rich mines of copper were worked to great profit, particularly in the counties of Wicklow and Kerry; about the same period, the famous marble quarries of Kilkenny and Waterford counties were advantageously worked, and quarries of slate, and of the stone called mountain grit, which resembles in colour the Portland stone, but is much superior to it in hardness, were opened in several districts. The working of the metallic mines subsequently fell off; but that of the marble, slate, and stone, quarries increased considerably towards the close of the century, up to which time a multitude of noble public and private structures of marble and gristone, roofed with slate similar to that now quarried at Valentia, on the south-west coast of Ireland, and with which the new Houses of Parliament are, it seems, to be roofed, were raised in Dublin and other places in the kingdom. The variegated marble of the county of Waterford is as highly prized as it is beautiful, from the blending of its various shades and figures, and fine high polish it is capable of taking. The marble of Ardara, in the county of Meath, which polishes to a dove colour, is also highly prized. Of all these species of marble there is in different parts of the kingdom an inexhaustible abundance. Limestone is found in vast abundance in many

districts; as is also a very fine and durable free, or sandstone, of which there are extensive quarries in the sea-coast districts of the county of Cork. Of this stone several noblemen's and gentlemen's seats, as well as churches, chapels, and other public buildings in those districts, are constructed. Slate, varying in quality from that of the best Welsh to the inferior Cornwall, and, in many instances, superior to the Welsh, is found in all the mountain ranges; and manganese of the best quality has been recently discovered in the western district of the county of Cork. The copper and other mines now working, or being explored, we shall reserve for some future notice, in an early Number.

#### THE RAILWAY CRISIS.

In our city article we have given a very general view of the railway business during the week—a week replete with the most disastrous consequences to many a reckless speculator, really beneficial to none, and one which will long be remembered by every member of the Stock and Share Exchange. On reference to our share list, in which we now give the highest and lowest prices during the week, it will be seen that not only have doubtful or embryo lines, been reduced to a considerable discount, but old established and paying lines—such, for instance, as the London and Birmingham, Great Western, London and Brighton, and others, which ought to be considered lines for good investment, have experienced the most extraordinary fluctuations. In fact, although, as we have stated in the article above referred to, that greater confidence appears to mark the transactions of the day, we fear it is only superficial, and that it will yet take some weeks before the market is thoroughly weeded, and confidence completed—probably, the expiration of the present month, when it will be known what lines have qualified themselves for the ensuing session of Parliament, will place things on a more healthy footing.

The recent resolution in the Bank Parlour, to increase the rate of interest to 3½ per cent. will be severely felt during the next week—as it was a step but little expected, and which the market was totally unprepared for. In Liverpool, parties appear to be in a worse condition than in London: many of the brokers have so jumbled together—so mingled settlements with differences, and got so entangled in the meshes of each other's nets—that, it is expected, numbers must eventually break up, unless an almost miraculous change immediately takes place, and which we cannot expect in the present aspect of affairs. Perhaps, a more exciting and important crisis hardly ever existed in the money market,—and happy shall we be, if the cloud pass us, without bursting in an overwhelming storm, such as its black and portentous appearance forebodes.

#### PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

Considerable advantage having resulted from the revival of the *conseil de prud' hommes* for one branch of trade, a similar *conseil* has lately been established for those who are connected with any of the trades for working iron and metals of every description. The principal duty of the *conseil de prud' hommes* is to settle disputes between members of the same trade, and between masters and workmen, and in the discharge of that duty it renders services of which the importance cannot be overrated. But, besides that, it occupies itself with the superintendence of the general interests of those concerned with metals, either in producing or manufacturing them. At present a *conseil* exists only in Paris; but it is proposed, I understand, to establish others in the mining districts. Altogether they are very valuable institutions, and might undoubtedly be imitated with much advantage in our own country.

What may be called the "iron question" excites much attention among mercantile men, but none of the newspapers say anything about it, probably because they do not understand it. France, it is calculated, will require, within the next four years, about 3,000,000 tons of iron for her railways alone, without counting the demand for other purposes, which is every day increasing, especially in consequence of iron being now used, in a great degree, as a substitute for wood in building. But her present annual production is only about 350,000 tons, and it cannot, by any exertion, be much increased. To supply the deficiency it has been proposed, as I have before mentioned, to buy in the American market, in preference to the English, or the Belgian; but, even supposing American iron to be cheaper than English or Belgian, which it is not, the heavy cost of freight to Europe would make it infinitely dearer. Now, it is true that France is somewhat benighted, with respect to commercial policy; but we cannot suppose her so stupid, as deliberately to shun the cheapest market, in order to buy in the dearest. If, however, she should be blockaded enough so to act, *America could not meet her demand*. Official documents forwarded to this country by the United States' Government itself, prove that the production of iron by the great iron district of the union, the State of Pennsylvania, was, in 1844, about 350,000 tons; for the present year it will be about 300,000; the rest of the Union will yield this year about 100,000, which will give a total of 400,000 tons. Is such a supply greater than the States used for their own annual consumption? It is not, I think, very probable; but even supposing it to be twice or three times so, still the surplus will fall very far short of the enormous demand of France. America, it is true, has made most gigantic strides of late years in her iron trade; but even giving her credit for ability to make similar gigantic strides for the next six years, she will not be able to step up to the 3,000,000 tons which France will need. Thus, I think, it will be admitted, both on account of expense and inability to meet the supply, that it is perfect folly to talk of the United States as the market from which France must purchase the iron needed for her railways, which she herself cannot supply. In future letters I will review the capabilities of Germany, Russia, Sweden, and even Spain, for all are spoken of as being to be preferred to "perfidious Albion." The details I shall communicate will be derived either from official documents, or other authentic sources, and may, therefore, be depended upon as correct. Meanwhile, I may mention that, in all probability, the result to which the investigation will bring us, will be, that in spite of the dread French ironmasters entertain of having to compete with England, and spite of all the expedients they will employ to get a bar put upon her, she must, sooner or later, be called upon to supply France with the iron rails, of which she will have such urgent necessity. A glance at the map of France will show that the railways now in course of execution, or about to be undertaken, are not a tithe, or a twentieth, or a fiftieth part of what will be necessary to complete the *réseau* which England, Belgium, and Germany will shortly have, and which France must have also. By consequence, the 3,000,000 tons of iron which she requires now, or at latest within a few years, and which she is unable to do more than partially supply, will be but a tenth, a twentieth, or a fiftieth, of what she will eventually need, but which eventually she will be, as she now is, unable to do more than partially supply. If my anticipations turn out correct, that England must be asked to make up the deficiency, our ironmasters have glorious prospects before them. Already have some of them begun to calculate upon it, and to make their preparations accordingly. Others, more impatient, have set up an establishment at Boulogne, to which, though they cannot at present import iron, they bring the *minerai*, and, by manufacturing the iron in France, save the enormous and prohibitory duties upon the English material. Even with the heavy expense of bringing the *minerai* a vast distance, of paying duty upon it, and of working it in a spot where coals and labour are very dear, they can contrive to sell it as cheap as the best native establishments. But such an establishment can only continue operations until the existing exorbitant duties shall be removed or modified.

The subscription for shares in the Spanish Mining Company of M. Ferrère was advertised to be closed on Saturday last.

The *commissaires* of the Nouvelle Montagne Company have reported that they have examined the accounts, and the *filas* of the company, and have found both strictly correct. The works are represented to be carried on with the strictest economy, and are generally in a satisfactory state. To the 31st May the *avoir* of the society was 3,020,101 fr. 97 c., and the auditors assure the shareholders that nothing was estimated too highly, the calculations being invariably under the mark, sometimes as much as half. The profits on the year 1844-45 were 20,101 fr. 97 c. The salary of the director and the *employés* of his offices amounted to 22,876 fr. 37 c., which was represented as extremely moderate. The report gives long details of the works undertaken and in progress, and of the results that have been obtained. On our Bourse, yesterday, the *Vieille-Montagne* shares were 7400 fr. Nothing was done in the *Nouvelle Montagne*. The *Mines de Grand Combe* were 1600 fr.; the *H. Fourn de Monceaux*, 1950 fr. To-day nothing was done either in the *Vieille-Montagne*, or the *Nouvelle Montagne*; the *Mines de Grand Combe* were 1600 fr.; of *Monceaux-sur-Sambre*, 1950 fr.—Paris, Nov. 4.



## Original Correspondence.

## THE LEAD TRADE—ENGLISH AND AMERICAN.

SIR.—In the early part of August, 1844, you inserted a communication from an "American Correspondent," containing a statistical account of the dealings between truth-loving Jonathan and the English in the article of lead. Among the many facts he heaped together, was one to the effect that, "About ten years ago, Great Britain exported to America nearly 10,000,000 lbs. of lead; but now the tables are turned, for, in the past few years, we have imported none of that article, and in 1841 commenced the exportation of large quantities of it to England." I upset this beautiful Yankee stretcher by certain Parliamentary returns, showing that the quantities of foreign lead, from all quarters of the globe, retained for home consumption, was so trifling as not to be deserving of notice. For instance, in 1841, 35 tons; 1842, 54 tons; 1843, 108 tons; and in 1844, 48 tons!—so much for Jonathan's bounce on this head. I, at the same time, August 31, 1844, called in question your patriotism, for publishing some of the most astounding reports of the discoveries of masses—huge masses—of lead ore in caves of immense dimensions, and I don't know what else. You fell foul of me in a "leader," and dealt me some heavy blows, which I took in good part; but my worthy friend, the "American Correspondent," never made his appearance again until last Saturday, when he came out in your columns with a flaming statement (statistical, of course), about the mineral produce of the United States. Under the head of *Lead* he remarked: "That the most extensive lead mines in the world are in Missouri, where the lead region is forty miles long, by fifty wide!"

"The sun's perpendicular heat illumined the depth of the sea.  
The fishes, beginning to sweat, cried—'how hot we shall be!'"

He added: "That these mines, in 1836, produced 7,500,000 tons of lead!" Now, I have had an opportunity of looking over, from time to time, the American official returns, and I have particularly noticed that the entire produce of the United States was from 13,000 to 14,000 tons annually. According to this statement, it would, in adopting 13,000 tons as your quotient, take just about five hundred and seventy years to raise the above quantity of 7,500,000 tons of lead! This is so much in character with the paragraphs which appear so frequently in your talented columns, about the finding of caves filled (this is pure Irish) with enormous masses of lead ore, in the mining districts of America, that your numerous readers must be highly amused when they read them. It is very odd, that, in the teeth of all this prosperity, English lead should maintain so high a position, as to price, in both the home and foreign markets. The fact is, the truth of these Yankee reports is sufficiently evidenced by the fact that, if one single cave of the number so recently discovered were correctly described, its produce would suffice to glut every market, east, west, north, and south, and thereby close every other lead mine in the world.

Pinckney, November 7.

J. W.

P.S.—I have omitted to state, that he put down the whole produce of the United States, in 1826, as 8,332,105 tons. In charity I must conclude that he means pounds, and not tons.

[Our correspondent must not mistake us, as agreeing in the arguments, or vouching for the accuracy, of the many "facts" to which we give insertion. We give them merely as represented, from correspondents, or extracted from American papers, and they frequently afford us much merriment, as they must to many of our readers, from the resemblance they bear to Jonathan's tales. We thank "J. W." for his letter, and should feel greatly obliged by his favouring us, as he seems well able, with some statistical information respecting the lead trade.]

## PATENT GALVANISED IRON.

SIR.—Far be it from me to enter the arena of controversy with respect to the "Patent Galvanised Iron Company," and Messrs. Morewood & Rogers: I shall, therefore, merely consider the scientific merits of the case, as far as the galvanic principle is really implicated. It is, after all, merely my own private opinion, as an electrician; and, of course, I do not stand committed in any way for the opinion of others. The conjunction of a relative electro-negative metal with one comparatively electro-positive in the series, is necessary for the defence and protection of the former, or relatively less oxidisable metal, from the contingencies of corrosion and decay: thus, silver and copper may be protected by iron, and iron by zinc—the zinc being compared with the iron, the more oxidisable of the two. When iron is defended by zinc, as in the case of the material of the Patent Galvanised Iron Company, the epithet "galvanised iron," on voltaic principles, seems correct and justifiable;—i.e., in my opinion; but I must confess, that to me, "galvanised tin-plated iron," sounds very much like a misnomer. I should, indeed, feel disposed to question, whether the combination of tin might not so far detract from the amount of the protective power of the zinc. It renders the question, at any rate, more complete and questionable—if, indeed, "galvanised tin" were not the more appropriate name.

Portland-place, Hull, Nov. 4.

J. MURRAY.

## SCIENTIFIC MEN.

SIR.—Assuredly your correspondent may well spare his tirade against scientific men, whose "wear and tear" of life, for the public weal—with the exception of a favoured few, the *rares aves* of fortune—are, as far as self-interest is concerned, a blank in the economy of humanity; and for themselves, individually, in a pecuniary aspect, the midnight oil has been wasted in vain. They merit the sympathies of the good; not the sarcasms and sneers of those in whose sensibilities, the *con amore*, or pursuit of science for its own sake, is a sentiment utterly unknown.

I am, as your pages will witness, not in the habit of thinking by proxy, or availing myself of "a cat's paw"; and when I vindicate the claims of Mr. James Ryan to public attention, it is in the character of philanthropist to the species—a lover of my kind. I have spent thirty-five years of my life in unwearying efforts and exertions for the benefit of my species—to enhance the fortunes of social and civil life, and to aid the progress of the arts and manufactures. I have expended no trifling amount in philanthropic inventions, without a farthing return; and for the rest, let the twenty-seven various works I have published be my advocate and redeeming plea with the public, in whose estimation I wish to stand honourably acquitted, and whose cause I will serve to the best of my ability, for what may yet remain to me of life's "eventful history." Under these circumstances, can it be wondered at, that I should feel rather sensitive at unmerited insinuations?—J. MURRAY: November 4.

## PROPOSED BRIDGE ACROSS THE SEVERN.

SIR.—On seeing Mr. Rogers' rejoinder to my letter, in your valuable paper of the 11th ultimo, I made sure I had been mistaken in my observations as to the length of his proposed bridge; but, on referring to the Journal, I find the following—"total length, with embankments, 6 miles; total breadth, 132 feet, with two railways, two footpaths, a public road, and also a range of building shops, bazaars, and dwelling-houses;" the latter I suppose because there is no room to build on *terra firma*. But I am surprised Mr. Rogers should dispute what he had written. The cost also of the whole concern is to be 10,000,000*l.*; and, to crown the whole, we are to have a lighthouse in the middle, 100 feet high—on the top of which I should propose a statue of Mr. S. B. Rogers. That gentleman appears to think, that my floating-bridge is proposed to cross the river just at the English stones; but I dare say Mr. Rogers will allow that there are Welsh stones as well as English, and that some of these Welsh stones, properly put together by those masons to whom he refers me, would make a convenient slip and landing-place from the floating-bridge, without the necessity "of wading for three miles over rocks, stones, mud, and sea-weed, and from one inch to ankle deep in pools of sea water." I dare say Mr. Rogers thinks me obstinate, and hard of belief, as to the possibility of carrying out such a measure:—I can assure him I am. No one ever heard of such a bridge before; and as to seeing it, they never will! The enormous outlay, too, Mr. Rogers tells us, is to be paid by free tolls and Samaritanism! Will Mr. Rogers have the kindness to explain this Samaritanism? for I, among many others, cannot make it out. I cannot help thinking that many a good Samaritan will smile at Mr. Rogers, for his opinion on this subject; but he will find few to subscribe twopence towards his bridge.

Blakeney, Oct. 23.

T. DEAKIN.

THE COAL-FIELD IN MARYLAND.—One of the articles in the October number of the *National Magazine and Industrial Record* is on the subject of the coal-field in the upper and lower, or northern and southern, districts, covering 42 and 239 square miles respectively. Of this whole amount, 215 square miles, or 138,000 acres, are underlaid with available coal fifteen yards thick. This, in the common way of working, would yield 50,000 tons per acre, or 32,000,000 of tons per mile; a quantity said to be greater than the enormous annual consumption and waste of Great Britain. In all the British mines the coal is below ground at depths varying from 30 to 1,600 feet; the Alleghany measures are nearly all above the water level. The expense of working the latter is, therefore, much less than that of working the former.

## Glossary of English Mining Terms.

At the request of several correspondents, we are induced again to give a Glossary of Mining Terms, which will be alphabetically arranged and divided into those applicable to Cornwall, Derbyshire, and Mexico or Brazil. These will be followed by philosophical terms, and those generally used in scientific works or reports.

## CORNWALL.

**Acicular**—Slender, straight, crystals.  
**Adit level**—A horizontal excavation, through which the water drawn from the bottoms of the mine thereto by this engine, and that from above, passes off to the surface. This level is usually commenced from the bottom of the deepest neighbouring vale, and extended throughout a great part of the mine.  
**Adventurers**—Those who have shares in a mine. According to Fryce, in his *Mineralogia Cornubiensis*, In-adventurers are shareholders who attend to the working, and supply goods, out of which they benefit themselves. Out-adventurers are those who pay their quota of the expenses, without attending to the management of the mine, or benefitting by any supplies.  
**Aggregated**—When the component parts only adhere together, and may be separated by mechanical means.  
**Air-machine**—An apparatus for forcing fresh air into, or withdrawing foul air from, badly ventilated places.  
**Air-pipes**—Tubes or pipes of iron or wood for ventilating underground, or for the conveyance of fresh air into levels having but one communication with the atmosphere, and, consequently, no current of air.  
**Aitch piece**—That part of a plunger lift in which the clacks are fixed.  
**Alliacious**—The garlicky odour of arsenical minerals when heated or struck.  
**Amorphous**—Without form.  
**Anhydrous**—Without water of crystallisation.  
**Arch**—A piece of ground left unworked near a shaft.  
**Arched**—The roads in a mine, when built with stones or bricks, are generally arched level drifts.  
**Argillaceous**—Consisting of clay.  
**Arborescent**—Ramifying like a tree.  
**Arseniate**—The arsenic acid united with a base, as copper in the arseniate of copper.  
**Attie**—Rubbish, containing little or no ore.  
**Average produce**—The quantity of fine copper contained in 100 parts of ore; thus, a parcel of ore, having a produce of 10*l.*, contains 10*l.* per cent; of copper, being rather above the average of copper ores in Cornwall.  
**Average standard**—The price per ton of fine copper in the ore, after deducting returning charges for smelting, of 2*l.* 15*s.* per ton of ore in Cornwall, and 2*l.* 5*s.* per ton of ore at Swansea. The regulation of the standard depends entirely on the price which fine copper bears in the market, rising and falling in the same proportion. Supposing the produce of a parcel of ore to be 10, and the price at which it was sold to the smelter to be 8*l.* 18*s.*, the standard of that parcel will be thus obtained:—10 tons of the ore will be required to yield 1 ton of fine copper—therefore, 8*l.* 18*s.* × 10 = 89*l.* will be the value of the ore containing a ton of metal. For the same reason, the returning charge of 2*l.* 15*s.* must be multiplied by 10, making 27*l.* 10*s.*, which, added to the former sum of 89*l.*, makes 116*l.* 10*s.*, being the standard of that parcel. Low produce ore will naturally have a higher standard.  
**Axis of a crystal**—The lateral planes surround its axis, which is an imaginary line passing down the middle of the prism from the centre of the upper to that of the lower terminal plane.  
**Back**—The back of a lode is the part nearest the surface. The back of a level is that portion of the lode extending above it to within a small distance of the level next above.  
**Balance**—The miner's term for a mine.  
**Batch of ores**—Certain quantity of ore sent to the surface by any pair of men.  
**Bar of ground**—A vein of a different description of rock, &c., from that in its vicinity.  
**Base**—The substance to which an acid is united.  
**Bearers**—Supports to the pumps in the engine-shaft.  
**Bent away**—To excavate; usually applied to hard ground.  
**Bed**—A seam, or horizontal vein of ore.  
**Bed**—Indurated clay; a name given by miners to any indurated argillaceous substance.  
**Bit**—The steely end of a borer.  
**Black jack**—Blende.  
**Blende**—One of the ores of zinc, composed of iron, zinc, sulphur, silice, and water; on being scratched it emits a phosphoric light.  
**Black tin**—Tin ore ready for smelting.  
**Blast holes**—The holes through which the water enters the "windbore," or bottom of a pump.  
**Black tin**—Metallic tin.  
**Blat**—The air introduced into a furnace.  
**Blasting**—Forcing off portions of rock by means of gunpowder. A hole is made with a borer, into which gunpowder is inserted, then confined, and set fire to.  
**Blower**—A smelter.  
**Bounds**—The proprietary of tin ore over a given tract.  
**Bob**—The engine beam.  
**Bowlders**—Large stones or pebbles.  
**Botryoidal**—Globular forms, such as are found in copper, &c.  
**Borer**—A boring instrument, with a piece of steel at the end, called a boring bit.  
**Braze**—The mouth of a shaft.  
**Branch**—A small vein which separates from the lode, and very generally again unites therewith.  
**Brood**—Impurities mixed with the ores.  
**Bryle**—The traces of the presence of a lode, found in the loose matter, on or near the surface.  
**Buckers**—Bruisers of the ore.  
**Bucket**—The piston of a lifting pump.  
**Bucket lift**—A set of iron pipes attached to a lifting pump.  
**Bucket rods**—Wood rods, to which the piston of a lifting pump is attached.  
**Bucking iron**—The iron or tool with which the ore is pulverised.  
**Bucking plate**—An iron plate on which the ore is placed for being bucked.  
**Buddling**—Separating the ores from the earthy substance by means of an inclined hatch or cistern.  
**Bunch, or squat of ore**—A quantity of ore of small extent; more than a stone, and not so much as a course.  
**Burden, or overburn**—The substances reposing on a bed of stream tin ore.  
**Burning house**—The furnace in which tin ores are calcined to sublime the sulphur from pyrites; the latter being thus decomposed, are more readily removed by washing.  
**Burrow**—A heap of deads, attie, rubbish.  
**Cage of a whim**—The barrel on which the rope is wound up.  
**Cal**—Wolftram.  
**Cand or Kand**—Fluor.  
**Capel**—A stone composed of quartz, schorl, and hornblende, usually occurring on one or both walls of a lode, and more frequently accompanying tin than copper ores.  
**Captain**—One of the superintendents of the mine.  
**Captain dresser**—Superintendent of the dressing of the ores.  
**Carrack**—See capel.  
**Cases of spar**—Veins of quartz (not containing ores) which have not a direction parallel to the lodes.  
**Casing**—A division of wood planks, separating a foot way, or a whim, or engine-shaft, from one another.  
**Cathod**—A smaller capstan.  
**Caunter lode**—A lode which inclines at a considerable angle with the direction of the other lodes in its vicinity.  
**Charger**—An implement in form of the bit of a carpenter's auger, for charging holes for blasting, which are dug horizontally.  
**Chimney**—A process of similar effect to tossing, but being performed on small quantities of ore, the keeve is supported on the verge of its bottom.  
**Clack**—The valve of a pump of any description.  
**Clack door**—The aperture through which the clack of a pump is fixed and removed.  
**Claying**—Lining the hole (in which gunpowder is to be placed) with clay, to prevent the powder becoming damp.  
**Cob**—To break the ores with hammers in such a manner as to separate the dead or worthless parts.  
**Cockle**—Schorl.  
**Coffin**—Old workings open to the day.

## NOUVELLE MONTAGNE MINING COMPANY.

Extract from the Report of the Commissioners of the Anonymous Society of the Nouvelle Montagne, for the year 1844-45.

After having examined, with the most careful attention, the returns and accounts of the year 1844-45, we are fully satisfied with their correctness. The extreme order and perfect clearness which exists in every item, does as much honour to the administration, as it does to the continual attention of the resident director, who, independently of the direction of three establishments, situated at a long distance from each other, it was necessary for him to direct the important new works in course of construction simultaneously, at Engis, Prayon, and Verviers.\* Notwithstanding this, our examination of the returns of the establishment did not, in any one instance, discover the slightest irregularity in the books.

We have seen everywhere reign the strictest economy, as much in the works in course of construction, as in those in full operation. It is, above all, in the exploring operations where it was necessary to be extremely strict, and we have been enabled to convince ourselves to that effect, after several visits during the year by one of us, that these works have been carried on with the greatest economy. In those in operation also, nothing has been spared for consolidating the galleries, and everything is well arranged to facilitate the working of the miners. We have particularly devoted our greatest attention in examining the general expenses, and we have found none but those that were useful and necessary. The personal establishment of the offices, comprising the conductors of the works, and even the appointments made by the director only figure for the sum of 22,976*fr.* 37*c.* (or about 915*l.* 10*s.*), notwithstanding that it is necessary to keep an account of the great quantity of plans, and other extraordinary works, occasioned by the new constructions.

You have seen, gentlemen, in the report of the acting director, that the books of account drawn up to the 31st of May of this year, and approved of by the administration, present a balance in favour of the society of 3,020,101*fr.* 97*c.*, or 120,805*l.*, from which is derived a benefit on the operations of the year 1844-45, of 20,101*fr.* 97*c.*; it is to these returns we have specially devoted our attention, and, in consequence, we are perfectly satisfied, after careful examination, that nothing has been charged above its real value. We have also seen that the administration, far from wishing to exaggerate the prosperous position of the society have evinced the greatest reserve in making known all our resources, leaving it for the future to show the extent of them. The immovables are estimated according to the inventory of June, 1844, and the increase that exists emanates from the purchases made since that period—purchases that were really indispensable for the establishment at Engis.†

In the estimate given of the preparatory works and investigation the director has deducted the profit derived from the various ores extracted from them. We will particularly mention the discovering works of Dos, which had already produced on the 31st of May, iron ore to the value of at least 2000*fr.*, which shows a great metallurgical richness, and of which no account has been taken in the estimations entered in the returns. Since that period this bed of calamine of Dos, has taken most gigantic dimensions; as already, on the 31st of August, it had attained an acknowledged superficies of at least seven times the extent of that of Mallienne,‡ without then having arrived at its limits either in the east or west, and that the calamine, which is found in great abundance for some time past in the western part of the works, is of the very first quality.¶ The galleries of exploration are made, however, on a higher level to that where this description of mineral ore is generally found.¶ We deem it necessary to remark that, in the upper part of the lode (the only one that is worked at present at Engis, and which has furnished the *suines* or forges of Prayon), the ore is inferior in quality to that found on the level of the drainage gallery, which, added to the distance the mines of Prayon and Engis are situated from each other, is one of the causes of the increase in the price of manufactured zinc up to the present day.¶ Notwithstanding these drawbacks, the return of the ore has been from 23 to 25 per cent., which has justified the director to promise us a return of 27 per cent.¶ when he can operate upon the ores of a superior quality which must exist in the lower beds of the mines. In referring to the returns, we have again to remark that the zincs and leads in warehouse, as well as upon order, are estimated at the minimum sale price, after deducting 10 per cent. and 2 per cent. commission; that the ores in warehouse are estimated at the most not more than one-half their value, so that the value given of the new works is only the exact estimate of the expenses incurred up to the 31st of May.

(Signed) ADOLPHE SIMONIS, JAMES WILD, } The Commissioners of the  
COMTE DE DARMEMONT, } Society.  
FERDINAND TASTET,  
Verviers, Sept. 8, 1845.

\* At Engis the following buildings are in progress of construction:—eighty nine furnaces or ovens, lead furnaces, and crucibles for calcining; buildings for steam-engines, for casting or exhausting, flattening and crushing the ore, &c., &c.; buildings for the administration, the lodging of the workmen, warehouses, &c. At Prayon—buildings for eight zinc furnaces, lead furnaces, crucibles for calcining, for crushing machines, warehouses, &c. At Verviers—buildings for exhausting machines, for forges, warehouses, &c., &c. All these constructions commenced in the month of November, were suspended during the frost, and could not be continued until the month of March, which, added to a most unfavourable season for every description of building operations, caused a great delay in the lighting of fires of the zinc furnaces of Engis.—(Extracted from the directors' report.)

† These purchases consist in several lots of ground and buildings adjacent to the establishment of Engis; they contain together more than three hectares (acres), and cost the sum of 44,891*fr.* 66*c.*—(Directors' report.)

‡ On the 31st of August the exploring works of Dos, had already shown that the bed of calamine extended to a length of 300 metres, or 500 feet, with an average breadth of forty metres—120 feet.—(Directors' report.)

§ At the commencement of September, they met with, in the works of Dos, a block of calamine of several cubic metres. This ore was treated by itself in the new ovens or furnaces of Prayon, four of which are in full operation since the 26th of September. It yielded 33 per cent.; therefore, surpassing all our hopes.—(Note of the reporter.)

¶ They commenced this autumn near Engis a drainage gallery and for earthenware, running from the Moulin, and which is to cut through the bed of Dos at the depth of thirty-six metres below the present works, which are themselves at thirty metres below the soil. This gallery will be 1200 metres (3600 feet) in length. 108 metres were already terminated on the 26th of September, and it is expected to be able to finish the whole in two years.

¶ The price of the yieldings in the year 1844 to 1845 have been the result of most extraordinary circumstances, and particularly confined to the position of the furnace of Prayon, and to the proportional exorbitant expenses of a first establishment; but, as soon as our buildings will be finished at Engis, we shall then be able to enter into the normal conditions of our fabrication, and then, in preserving the cost of the extracting of the ores, such as it is at the present day, and calculating only of a return of 25 per cent., we shall be able easily to arrive at the cost price of 25*fr.* for the 100 kilos. (2 cwt.) of zinc, and 20*fr.* for the lead. We have only had, up to the present, for our manufacture but four old zinc furnaces, and one old lead furnace. We could not employ our flattening machine of Prayon, but according to the confined proportion of our productions of metal. The quantities, therefore, manufactured, have only been during the last year 68 tons of zinc in plate, 135 fillets in sheets or leaf, 67 ditto of lead in bars; and the profit realised on this trifling produce has been about 55,000*fr.*—(Extracted from the report of the directors.)—If at present we wish to cast a glance at the future prospects of the society, we shall see that we have already at Prayon four ovens, which, constructed on the same model as those of Engis, have been in full work for the last month in that manner, which leaves nothing more to be wished for; that near the close of the present year the four ovens of Prayon, and twenty on the same model at Engis will be in full fire; that in the first months of next year, twenty other ovens will be in operation at Engis, and towards the end of May twenty more—making a total of sixty ovens at Engis, and eight at Prayon, which will be in full work by May next; and that towards the end of 1846 all the buildings for ovens, flattening machines, steam-engines, &c., will be finished, and the society then will be in a position to have in constant activity sixty to seventy zinc ovens, and as many lead ovens as the produce of the mines may require. Therefore, the director considers himself authorised in promising us (and, we believe, after the actual state of the advancement of the works, that his calculations are not beyond his reasonable expectations) that he will be able from the year 1846 to give to the operations, works, and manufacture of the Nouvelle Montagne, all the extension which was announced on the foundation of the society. (We do not wish to confine ourselves on the probable benefits of the society, as we should fear of being too much taxed of exaggeration, but we can remark that, notwithstanding all the disadvantages of a first year, during which it was only possible to make use of but four ovens, and those in a bad state, situated besides at a distance of more than six leagues (eighteen miles) from the mines, and only working ores of a comparatively inferior quality to those which will be explored or worked next year; we have, notwithstanding these drawbacks, realised by even this small portion of manufacture a profit of more than 55,000*fr.* (3200*l.*); for the future, on the contrary, we shall have at our disposal, besides the eight zinc furnaces or ovens of Prayon, eighty new ovens constructed on the same model as the latter, and at Engis on the very spot where the ovens extracted, which will not cost to yield 28 to 30 per cent., instead of only 23 to 25, and, lastly, that we shall obtain a great economy in fuel, as coal which is found in sufficient abundance in our mines of Engis, where it is worked in the same large gallery as that of calamine, and has been acknowledged as superior to any other for reducing the ore.—(Note of the reporter.)

¶ A letter from the director announces, as we have already stated, in note (†), that the calamine from Dos yielded at the rate of 33 per cent. in the new ovens at Prayon.

MINERAL WEALTH OF SPAIN.—A letter from Leon states that the engineers of the English railway company, now forming from the Asturias to Madrid, having discovered a mine of coal in the plain of Monar, there were immediately formed four or five companies for working it—among them the Relampago, the Mantana, the Amiga, the Madrileña, &c. These companies possess, united together, considerable capital, and have taken time by the forelock, in order to work the richest mines in the neighbourhood. The mineral riches of Spain have certainly never been half explored, and there can be little doubt that if these mines be properly worked, the advantage to the country and speculators must be immense.



## TINCROFT MINING COMPANY.

A special general meeting of the adventurers in this mine was held at the offices, 44, Finsbury-square, on Thursday, the 6th instant.

JOSEPH GROUT, Esq., in the chair.

Mr. P. STAINSBY, the manager, then read the advertisement convening the meeting, which was for the purpose of offering to the shareholders the Dolcoath Mine, to work which it would be necessary to call up a portion of the unpaid capital of the Tincroft Company; after which, the following directors' report was read:—

REPORT.

The directors have called you together to take your opinion on the propriety of annexing to these mines the interest vested in the two leases which lie on the table; they recommend, and now offer to their fellow shareholders, this property—for the purpose of working which, it will be necessary to call up the unpaid capital, or such part as may be required, which can be done if you approve by the following instalments:—1*l.* per share in January, 1846; 1*l.* per share in January, 1847.

A report from Capt. Paul was also read, for which see our usual mining correspondence.—The CHAIRMAN said, that they had heard the report of the directors, it was necessary to inform them that the directors had on their own individual responsibility worked the mine about eighteen months at an expense of about 1260*l.*; so good an opinion had they of the set, that they had put up an engine, and made every preliminary preparation for a proper working of the mine; it adjointed South Wheal Bassett, the shares in which were quoted at upwards of 200*l.*; and himself and colleagues feeling assured there was every prospect of Dolcoath turning out as good a mine, thought it their duty to offer it to their co-proprietors, as, from its situation, it would form a most legitimate addition to Tincroft, which was rather a confined set. The proprietors, of course, would take or decline it, at their option; but he would press upon them that, in the event of their refusal, and it should hereafter turn out a highly profitable concern, they do not blame the directors for not securing it for them. From the situation of South Dolcoath set, he thought it should naturally appertain to Tincroft, and it was from principle they now offered it to the adventurers.—A PROPRIETOR asked, if any of the Tincroft funds had been expended in opening the Dolcoath set?—The CHAIRMAN: "Not a shilling."

Mr. ARON inquired, if the same proposal had not been made to the Tincroft proprietors, on a previous occasion, and failed?—Mr. SEWELL (the company's solicitor), in reply, read from the *Mining Journal* an extract from the report of the meeting in April last, at which the subject was brought forward: the directors afterwards issued a printed circular to each proprietor, requesting an answer, stating their intention with respect to taking an interest in the new mine, and, if favourable, how many shares they would take. To this document they received replies from consenting parties, willing to take up 1471 shares, but, as the number of shares was 2500, the company had never been matured, and the directors had continued to work it on their own account. He would just call their attention to a clause on the back of their shares, which empowered the directors to add any set or sets adjoining, or contiguous to, Tincroft, without the consent of the proprietors, provided it did not require an addition to the capital; and he thought they were entitled to some consideration, for the manner in which they had offered the set to the proprietors, without taking advantage of the power vested in them.

Several of the proprietors having expressed their unwillingness to interfere with the Tincroft Mine, which was doing so well, and recommended that Dolcoath should be brought out as an independent company, giving the holders in Tincroft the preference in the allotment of shares.—PENICUL N. JOHNSON, Esq., observed, that he feared that some gentlemen might think that the South Dolcoath set had proved a failure, and the directors were anxious to get rid of it, but he begged to assure them that such was not the case; he had carefully inspected the mine, and believed it would turn out as good as any of its neighbours—their prospects were improving, and he, with his brother directors, thought it right to offer it to the proprietors of Tincroft.—Mr. BARCLAY alluded to the dull situation of the mining share market; persons who, ten years since, would invest a thousand pounds, could now be hardly persuaded to sink one hundred. He said he held 300 shares in Tamar and 200 in Tincroft, but if he could realise his money again for them, he, for one, would relinquish mining at once; he thought it would be bad policy to saddle themselves with another set while Tincroft was a good mine, and paying regular dividends; still, he felt greatly indebted to the directors for the handsome manner in which they had brought the affair to the notice of the Tincroft adventurers.

The CHAIRMAN could not agree with Mr. Barclay as to the gloomy prospects of the mining interest: the price of copper and of tin were both advanced, of which they must reap the benefit. Tamar shares, on which 3*l.* had been paid, were worth 9*l.*; and Tincroft, which had cost 7*l.*, were selling at 14*l.* or 15*l.* With respect to the Dolcoath set, it was at the option of the proprietors; but it must either be accepted, so as to exonerate the directors, as present holders, or unconditionally declined.

After a good deal of further conversation, the following resolution was put from the chair, and unanimously negatived, not one hand being held up in its favour:—viz.: "That the directors be requested to take, and purchase, the set or sets of the South Dolcoath Mines, and to connect the same with the Tincroft Mines, and to call up such a proportion of the unpaid capital of the last-mentioned mine, as shall be necessary for assisting the working of the Dolcoath Mines."

Mr. BARCLAY then moved, "That a vote of thanks be passed to the chairman, for his conduct in the chair, and to the directors, for the liberal manner in which they had offered the South Dolcoath set to the proprietors of the Tincroft Mines," which was seconded, and passed with acclamation.—The meeting then separated.

## LAMARHOUE WHEAL MARIA MINING COMPANY.

A general meeting of the shareholders of this mine was held at the Corn Exchange, Mark-lane, on Thursday, the 6th inst., when a report was read from Captain Tabb, highly flattering as to the future prospects of this mine. The report was confirmative of the continuance, through this set, of all those valuable lodes already known in that neighbourhood. It was stated, that six lodes had already been cut by the present company, and that the position of others was positively known, which, in due course, would be developed.—After the usual business of the meeting, Mr. THOMAS (by whom, we believe, this set was originally taken up) called the attention of the shareholders to the defective manner in which the business of the company had been conducted. He complained that the purser, or the finance committee (if Mr. Snell, the purser, acted under their control), had infringed, or refused to comply with, many of the rules and regulations, by which the company had consented to be governed. Mr. THOMAS contended that, by the rules of the company, the shareholders were empowered to meet once in every two months, for the general business of the company, and that it was incumbent on the purser of the mine, and the finance committee, to attend with the accounts and reports; and he complained that this rule had not been complied with, that he had attended at the appointed time and place, that no appropriation of the room had been made for the meeting, and no person appeared to represent the company. That no notice had been given of the postponement of such meeting, or of other meetings to be held in lieu thereof, at which the shareholders should have an opportunity of seeing the accounts.—It was contended, by Mr. EDWARDS (the chairman), who had also generally acted as the chairman of the finance committee, and was, certainly, therefore, not qualified to sit as chairman at the meeting, where his accounts ought to have been subjected to the approval of the shareholders—that the rule referred to did not positively provide for a meeting of the shareholders every two months, nor was it incumbent on the finance committee, or the purser, to give notice or to attend, but it was only to be held if necessary, thereby implying, if not absolutely stating, that the necessity of such meeting should rest with the purser or the finance committee.

In reply, Mr. THOMAS urged, that such interpretation of the rule was opposed to the intention of the shareholders present when the rules were framed. He well remembered that it was then clearly expressed, that a two months' general meeting should be held, and that, in the intermediate time, the business of the mine should rest with the delegated body—"the finance committee"—that they were not to take upon themselves the power of the shareholders; that such interpretation was now only made to protect Mr. Snell, or to defeat his (Mr. THOMAS') object of conferring with the shareholders at a general meeting—that if the rule could be so read it should be amended, as, if the present construction was correct, the shareholders had no power to meet, except at the request, and by the concurrence of, the purser, or the finance committee, and it never was intended that they should possess such power, or control, over the mine. He further charged Mr. Snell, the purser, and the finance committee, with dereliction of duty, in refusing to call a general meeting, when requested so to do by Mrs. Williams, at that time a holder of 400 shares, who had for several months been desirous of laying before the shareholders a statement relative to the mode in which the treaty for the set had been conducted, and her reasons for not signing the lease, in which she was a party.

It was stated by the CHAIRMAN, that the reason why such meeting had been refused by Mr. Snell, and subsequently by the finance committee, was, that Mrs. Williams, in her application, had not specified the matter to be taken into consideration at such special meeting.—Mr. THOMAS contended she had

done so, as the application specified, "to take into consideration such matters, relative to the general interests of the mine, as my agent, Mr. Thomas, shall lay before them." It was, therefore, urged by him, that the objection was not a valid one, and the refusal arose from a reluctance on the part of Mr. Snell and others to the matters referred to being laid before the shareholders in general. He further drew the attention of the meeting to the informal manner in which the call now due had been made. He said that upon any call being made, each shareholder was to receive thirty days' notice from the purser, and if, during that time, the amount was not paid, his shares should be declared forfeited. He said the present call had been declared on the 9th of October. At a finance meeting—that it was made payable on or before the 1st of November—that such was in itself informal, as it only gave twenty-one days, but that the purser had further deprived him of the stipulated notice, by delaying to put it into the post until the 21st of October, thus further curtailing, by twelve days, the specified extent of the notice, on which, he considered, the safety of all absent shareholders depended.—The CHAIRMAN replied, that the present was not a call—that at the first meeting of the shareholders a call of 1*l.* was declared, to be received in such instalments as the finance committee should hereafter decide upon—and another member of the committee added, "that the finance committee had the power to make that and future instalments payable at one day's notice."

Mr. THOMAS contended that the committee had no such power—that the former resolution placed 1*l.* per share at their disposal, but subject, nevertheless, to the thirty days' notice to be given upon all calls, which form this and every instalment certainly assumed. He said he was quite ready to respond to the call on the 450 shares which he represented, but he objected on principle; and if the committee declared the shares forfeited in consequence of his non-compliance with the present informal call, he would carry the matter into the Court of Chancery: that the company were acting under rules and regulations subscribed to by the original shareholders; that such must be strictly abided by; and that, in addition to the necessary adherence to existing laws, many persons had subsequently become shareholders by transfer; that they could not be aware of a call, now receivable by instalments, stated to be payable at one day's notice; and if they were deprived of the customary notice, shares would be forfeited, and the company would soon be entangled in law suits. Mr. THOMAS also alluded to the improper conduct of the purser in want of punctuality in attending to the payment of the accounts of the mine at the appointed time, whereby the character of the company had been compromised, whilst it was known that ample funds had been at the command, or at the disposal, of the purser or the finance committee. He said he did not wish to lay blame where such was not due; that the purser was the only acknowledged party in these matters—he was, therefore, obliged to make the charge against him individually; that he was prepared to show, whenever the history of the lease came under consideration, that Mr. Snell, as his solicitor, had acted unprofessionally and improperly; that he considered he was not a fit person to stand in the important position of purser to the mine; and that he should move that the appointment be withdrawn.—As Mr. Snell was not present, none of these matters were put to the vote; but a meeting was appointed for Thursday, the 20th inst., to take into consideration such matters as Mr. THOMAS shall then lay before them, and that Mr. Snell, the purser, be required to be present at such meeting.

THEWATAS MINE.—A meeting of the adventurers was held on the mine on the 4th inst., when, from the accounts presented, it appeared that the labour cost for July and August amounted to 1033*l.* 3*s.* 6*d.*; merchants' bills, 536*l.* 2*s.* 6*d.*—making a total of 1569*l.* 6*s.* The ores sold, less lord's dues, amounted to 1047*l.* 9*s.* 8*d.*—showing a loss on the two months of 511*l.* 16*s.* 4*d.*; and the cost book being in debt, to end of June, 4103*l.* 11*s.*, showed a total deficit of 4616*l.* 7*s.* 4*d.*, from which deduct amount of call made in September last, 1280*l.*, shows a balance against the book of 3336*l.* 7*s.* 4*d.* The arrears of calls, amounting to a large sum, the purser was directed to draw bills on each adventurer at two months for the amount due, and to proceed against those who did not accept such bill within fourteen days. It was decided to fix a railway in the diagonal shaft, flat rods in the forty-five fathom level, and that the thirty-two fathom level end be suspended. A call of 10*l.* per 1-128th share was made, payable on the 1st December next.

CARADON UNITED MINE.—A meeting of shareholders was held, on the 6th inst., for the purpose of receiving the report of the captain, and auditing the accounts. The report, on being read, produced the liveliest satisfaction, and it was immediately resolved to sink the engine-shaft to the thirty fathom level, and drive a cross-cut from thence, which will take the lode in about three months. A call of 2*l.* per share was then made. Other business of a private nature, connected only with the company, having been transacted, the meeting was dissolved.

ST. AUSTELL CONSOLS MINING COMPANY.—A special general meeting of the adventurers was held at the New Inn, Tywardreath, on the 23d ult., the Rev. Prebendary LYNE in the chair.—A report of the present state and prospects of the mine from the agents was read, and which will be found among our usual mine reports.—From the statement of accounts, it appeared that the cost for the four months to August last amounted to 244*l.* 19*s.* 1*d.*; balance from last account, 12*l.* 14*s.* 4*d.*—making a total of 257*l.* 13*s.* 5*d.*; and there receipts had been, on calls, 248*l.*—leaving a balance to debit of next account of 9*l.* 13*s.* 5*d.*—The report and accounts were then unanimously adopted, and a call of 1*l.* per share made, payable immediately.—It was also resolved, that to give confidence to the out-adventurers, a copy of the accounts in detail should be sent to any shareholder, on his forwarding a Post-office order for 7*s.* to defray the expense of a clerk to copy the same, paper, and free transmission.—A vote of thanks was then passed to the chairman, and the meeting separated.

## THE SILVER MINES OF THE CALLINGTON DISTRICT.

As many of the readers of our Journal are deeply interested in the mines near Callington, a brief sketch of the silver mines in that locality may not be uninteresting, on the eve of their further development at the present period of mining enterprise. The mines to which reference is given, are Wheal Brothers, conjoined with East Wheal Prosper (now known as Silver Valley), and Wheal St. Vincent, or East Cornwall (part of which is now worked under the name of Wheal Mexico). These lodes run nearly east and west, being about 100 fathoms distant from each other, a mile to the south of Kit Hill, and in kiltas, that hill being composed of granite, and traversed by elvan courses. The Wheal Brothers lode has been worked at different periods since the year 1812, then known as Wheal Duchy; during each working large quantities of silver have been returned; it varies from one foot to three feet in width, carrying very regular and smooth walls. The lode is composed of flookan, carbonate of iron, mundaic, and jack, or blende (perhaps, better known as zinc ore.) It is difficult to ascertain the exact quantity of silver which has been raised from the mine; but the general opinion is, that at least 40,000*l.* worth has been sold since its commencement; during the last working, from 1833 to 1838, about 15,000*l.* worth was raised. The ores are of different kinds, having all the varieties of those found in Mexico—viz., native chloride, grey, red, and black oxide of silver; the richest part of the mine was from the adit to the thirty fathom level, and, at one time, the lode was worth nearly 300*l.* per fathom; from one bunch upwards of 3000*l.* worth of silver was extracted. A large engine is now nearly completed on the eastern part of the mine, on what was formerly known as Wheal Prosper, or West Wheal Brothers, and in a month or two the lode will be seen in depth, of which report speaks favourably.—The East Cornwall lode averages about the same size, and has returned about 30,000*l.* worth of silver ores, of nearly the same character as that of its neighbour; the colour of the flookan, however, is generally of a darker hue, particularly near the surface, and in depth it not only presents every appearance of a copper lode, but has actually returned several tons of copper of a very rich quality, and, indeed, there is no doubt of there being copper lodes carrying silver on their backs; the rich bunch of silver raised from this mine was composed of muriate of silver. It may here be remarked, that the Harrowbarrow Mines (the engine of which will be completed in a few weeks) embrace the two above-mentioned lodes, and has returned in former workings several hundred tons of copper, and no inconsiderable quantity of silver, and from whence silver is at the present time being raised. Sir H. de la Beche has given it as his opinion that those lodes or cross-courses, where the rocks are near granite or elvan, have been the most productive of silver ores; this being the case in Herland Mine, where elvan traverses the kiltas, and from which silver ores to the value of 8000*l.* was raised. According to Mr. Carne's statement, the silver was found in a cross-course, and was richest when it intersected the copper lode. It was discovered, it seems, in the ninety fathom, and continued to the 120 fathom level of that mine.

DEVELOPMENT OF MINERAL WEALTH IN SCOTLAND BY RAILWAYS.—The proposed Lanark, Dumfries, Ayr, and Galloway Junction Railway will connect the different railways of Lanarkshire, Ayrshire, and Galloway, and, at the same time, open up channels of communication between the principal mineral, agricultural, and shipping districts of the west and the south of Scotland. By means of this railway and others connected with it, we doubt not that Ayrshire will, ere long, prove what it has long been called—"the Staffordshire of Scotland." Apart from extensive passenger traffic—which, in other lines, generally forms a most important item—this line must develop and bring into the great markets of commerce inexhaustible fields of the richest lead, ironstone, coal, and lime, while there can be little doubt about its success as a passenger line, connected as it is to be with such important railways as the Ayr and Dumfries Junction, the Ayrshire and Galloway, the British and Irish Union, and the Scottish Southern; and it will, by means of these, afford the speediest and most direct communication between the east of Scotland, England, and Ireland. It is, we believe, now generally known, that in the Glen of Affric alone, through which the railway passes, most extensive seams of lead have recently been discovered, and in that district of the country coal and lime are also most abundant; and by means of the proposed railway an outlet will be got for these to the districts of Galloway, which are altogether devoid of them.

## Mining Correspondence.

## ENGLISH MINES.

## BEDFORD UNITED MINING COMPANY.

Nov. 4.—I beg to hand you my report of these mines. At Wheal Marquis the new engine-shaft is 7 fms. 3*ft.* under the seventy fathom level. The lode in the seventy fathom level east is two feet wide, composed of gossan, spar, and ore, saving work; and in this level west the lode is at present small, but very kindly. I am glad to say that the lode in the fifty-eight fathom level east continues to look well, being about two feet wide, and worth two tons of ore per fathom; there has been no lode taken down in the winze in this level since last report. At Ding-Dong, Thomas's engine-shaft is now down to the twenty-four fathom level; the lode at this point is about three feet wide, producing saving work for tin. At Wheal Tavistock, Phillips's engine-shaft is 8 fms. 5*ft.* under the twenty-five fathom level; the lode is about two and a half feet wide, producing saving work. In the twenty-five fathom level west no lode has been taken down. The sinking of the shaft on the south lode is progressing satisfactorily; the lode is without important alteration. We weighed at Morwelham, on Friday last, September ore, 106 tons 10 cwt. 2 qrs., and sampled October ore, computed 106 tons 2 cwt. J. PHILLIPS.

## GONAMERA MINING COMPANY.

Liskeard, Oct. 29.—At a meeting of the adventurers, held this day, the accounts having been seen and allowed, it was resolved—That a call of 1*l.* per 1-256th share be now made, payable immediately at the Devon and Cornwall Bank, Liskeard.

## NORTH WHEAL ROSE MINING COMPANY.

St. Agnes, Nov. 3.—The flat rod shaft is down to the sixty, and the present week will be employed in casing down the shaft and cutting a plat, preparatory to driving to cut the western lode at that level; the lode in the shaft is from one foot six inches to two feet wide, but, as I told you in my last, not rich. We shall commence driving on it at the same time that we take up the cross-cut north. The eight fathoms, driven on the fifty fathom level, has produced 4 tons of lead; but the lode is not looking so well as it did last week. In the forty fathom level cross-cut east, the ground is much the same as it has been for some time; from the distance driven, the eastern lode ought to be seen in all this month. We propose sampling this week about 80 tons of lead, which should produce 14*l.* per ton at least.

## BARRISTOWN LEAD MINE.

Carry Taghmon, Oct. 24.—Since my last report, we have clearly defined the lode east on the new ground; it is about four feet wide, and mixed with gossan, lead, iron, and blende—we shall commence to sink on it immediately. The end east, coming towards this point, at the eighteen fathom level, looks much the same, producing from three-quarters to one ton per fathom; the stopes in backs over this stoping on twofold. The men have this week taken down the lode; it is two feet wide, and for several fathoms in length producing two tons per fathom, greatly improved. The stopes in bottoms will not be in a way of taking down the lode till next week; the western fore breast has not been forced in on twofold on account of bad air. We have cleared up a shaft further west, which has ventilated this part of the mine, and now we commence on it with vigour. The cross-cut from flat rod-shaft is still in branches, and water proceeding from the end; I saw sparks of lead there yesterday. I have set the middle lode on tribute east and west of the shaft near the kiln, and expect from the present prospect to raise a good quantity of stamp stuff from this part. The tribute pitches look just the same as when I last reported; our raising this month will be about the same quantity as last. The branch west of slide is about six inches wide, very good quality. I hope this will improve in our driving west; the horse of ground standing between the lodes is about two fathoms, and mixed with branches.

Oct. 31.—Since my last report, we have taken down the lode in the eastern stopes, back and bottom, and the quantity of lead (viz., one ton per fathom in the lode) is much the same; in the eastern end the lode is about twelve inches wide, producing half a ton of lead per fathom; in the western end the lode is twelve inches wide, producing one ton and a half per fathom; nothing cut in cross-cut from flat rod shaft since my last; the opencast on middle lode looks well, producing this week, from two tributaries working on this lode, about one ton of ore; other tributaries have commenced to work on it further west, and in a few days the men will commence to drive east on it in cross-cut from flat rod shaft; the lode in opencast is about three feet wide, mixed with ore, gossan, and iron. Tributaries through the mine are breaking a fair quantity of ore at 5*l.* per ton. I have set a shaft to sink on the lode at the new discovery east, which will be reported on in due course. The stamping-mill is ready to work; we are waiting for the springs and rain for a supply of water. Our quantity taken down from the eastern stopes this week is about four tons.

## ST. AUSTELL CONSOLS MINING COMPANY.

Oct. 23.—Since our communication to you of the 19th of June last, we have holed the eastern shaft on Williams's lode to the adit level, and have driven about forty fathoms further east on it—for the whole distance of which we have had a large and very promising lode three feet wide, composed of gossan, mundaic, and black copper ore, and in every respect presenting an encouraging appearance of making a very productive lode at no great distance. We expect to hole the western shaft, sunk for the purpose of facilitating the working more effectually of the Great Goffin lode in about a month—on which we were obliged to suspend the driving from want of proper ventilation until the shaft be communicated to the adit, which will then be resumed both east and west on it, at a much less expense than before; and where, from the present indications, we hope to meet with success. We have about seventy fathoms further east to drive to intersect the Wheal Hawkins lode, when we shall be better able to decide where to fix a steam-engine, for the purpose of effectually proving the lodes at a greater depth, and which we consider from their appearance at the adit level to fully warrant. We have now about ten tons of ore on the mine ready for sampling. J. SAMSON. N. TREDDINICK.

## WEST CARADON MINING COMPANY.

Liskeard, Oct. 29.—At a meeting of the adventurers, held this day, the following accounts were exhibited, allowed, and passed:—Labour cost for July and August, 2684*l.* 10*s.* 11*d.*; materials, &c., 1279*l.* 18*s.* 10*d.*; lord's dues, 372*l.*; dividend, Sept. 1st, 1600*l.*; balance, 3438*l.* 10*s.* 9*d.*—Total, 9375*l.* 0*s.* 6*d.* Received for copper ore, 6276*l.* 6*s.* 6*d.*; ditto materials sold, 337*l.* 7*s.* 10*d.*; balance of last account, 3065*l.* 12*s.* 2*d.*—Total, 9375*l.* 0*s.* 6*d.* It was then resolved—That a dividend of profit of 7*l.* 10*s.* per 1-256th share be now declared, payable on the 1st proximo at the Devon and Cornwall Bank, Liskeard.

## SOUTH YEOLAND MINING COMPANY.

Liskeard, Oct. 28.—At a meeting of the adventurers, held this day, the accounts having been seen and allowed, it was resolved—That a call of 1*l.* per 1-128th share be now made, to be paid immediately at the Devon and Cornwall Bank, Liskeard.

## WHEAL SISTERS MINING COMPANY.

Oct. 28.—The lode in the twelve fathom level end, west of the flat-rod shaft, is two and a half feet wide, producing about three tons of copper ore per fathom. In the stopes in the back of the thirty-one the lode is about three feet in width, yielding two tons per fathom; and in the winze (sinking under the bottom of this level) four tons per fathom. The lode in the end, driving east, is about two and a half feet wide, composed of capel and peach, spotted with mundaic and ore; and in the western end it is three feet wide, with black ore of a very kindly appearance. The forty-one fathom level has been extended west seventeen fathoms, leaving about eight fathoms more to drive to come under the eastern part of the course of ore in the thirty-one fathom level; the lode in the eastern end, at this level, is about two feet in width, composed of spar, peach, jack, and mundaic. The shaftmen have contracted to sink the shaft from the forty-one fathom level to the fifty-one at 11*l.* per fathom, which we expect they will accomplish in two months. There being several cross-courses intersecting the flat-rod shaft lode at the points where it has been found so productive of ore, and the strata being very congenial for mineral, we beg to direct the attention of the shareholders to the probability of the side lodes being found productive, parallel with the course of ore already discovered, and would recommend that a cross-cut be extended south on one of the cross-courses, opposite the course of ore in the thirty-one fathom level, to intersect the south lodes. We would also recommend that the adit be driven west on the north lode (being the furthest level west, and the softest ground), to explore the two north lodes at the aforesaid position; the lode in the end consists of peach and priam, spotted with black and yellow ore, and could be driven for 50*s.* per fathom. The distance to drive west to intersect the first cross-course is about thirty fathoms, and then south to intersect the middle lode, twenty-five fathoms. JAMES NANCE.

At a meeting of the adventurers, the following accounts were exhibited, allowed, and passed:—Labour costs for July and August, 740*l.* 7*s.* 1*d.*; materials, 145*l.* 3*s.* 1*d.*; lord's dues, 50*l.* 3*s.* 6*d.*; balance, 565*l.* 3*s.* 2*d.*—Total, 1501*l.* 1*s.* 10*d.* Received for one month's sale of copper ore, 843*l.* 18*s.* 4*d.*; balance of last account, 657*l.* 3*s.* 6*d.*—Total, 1501*l.* 1*s.* 10*d.*

## WHEAL MEXICO MINE (NEAR CALLINGTON).

Oct. 28.—In driving the twenty fathom level west, the lode is much improved, being composed of sugary-spar, mundaic, and white iron; the country is also changed to a beautiful kiltas, almost white—altogether, it presents a very favourable appearance, and is exceedingly kindly for silver—in fact, it very nearly resembles the Wheal Brothers lode at this level. Our last parcel of ores has not yet been sold, the price offered being too low. Two tributaries have taken the copper lode at 10*s.* in the 1*l.*, and have already raised a large pile of (black jack) zinc ores, interspersed with stones of copper and lead; this is a remarkably strong lode, and varies from nine to fifteen inches in size. We intend having the opinion of some competent agent on this lode next week. WILLIAM KNOTT.

## GUNNIS LAKE MINING COMPANY.

Nov. 4.—At Chilworth, Bailey's engine-shaft is six feet under the adit level—ground favourable. The lode in the adit level is about two feet wide, without alteration. WILLIAM RICHARDS.



## SOUTH DOLCOATH MINE.

Nov. 3.—The masons are getting on very well building the engine-house, and hope in future to have a full supply of stones, so that there will be no further let. The engine purchased at Great St. George is all safely delivered on the mine, and we have every reason to believe it to be a good bargain. The engine-shaft is about six fathoms under the shallow adit; the lode in the shaft is three feet wide, containing some good spots of copper ore in a very fine looking gossan. Several mine agents having been on the mine looking at the stuff from the lode, they all speak in very high terms of it. The large cross-course which has intersected all the lodes in Dolcoath, Cook's Kitchen, North Rose, and Wheel Seton to the north, and about which all the lodes have been productive, will intersect the South Dolcoath lode about fifteen fathoms to the west of the engine-shaft, so that I do not think a better situation could be selected for the engine. I regret to say, that we find the water increasing in the shaft, so that I fear we shall not be able to sink it to the deep adit till we set the engine to work. The deep adit referred to is now in course of driving towards the engine-shaft, and is about twenty fathoms from it; in the said adit end the lode has a very promising appearance indeed, and contains some ore. We have secured the collars or tops of shafts in the eastern part of the mine, built carpenter's shop, and have done the little preliminary surface work for working a mine, and now our attention will be directed to going down as fast as we can; and from the appearance of the lode (only about 16 fms. from surface), I am decidedly of opinion it will be with good success. W. PAUL.

## WHEAL VICTORIA MINING COMPANY.

Liskeard, Oct. 22.—The deep adit, driving north, is in about forty-five fathoms, and we expect we have from four to five fathoms more to drive to cut the lode that is before us, and which has been seen on the back. The tin lode that we have intersected in this adit is still looking well. According to its present appearance, we hope this will speedily assist to pay the cost of the mine. There are tributers working on this lode at 10s. out of the 1L, and we have little doubt of their getting good wages at that price. We have not yet holed the north adit to the engine-shaft, but expect to do so in about three weeks from this time, when we shall immediately commence sinking our engine-shaft below the adit. We are obliged to suspend the sinking of the north whim shaft, in consequence of the great influx of water. The wheel pit is nearly completed, and the wheel is on the mine in full readiness to "leave in"; and we look forward to get all to work very shortly. I am strongly of opinion that the appearance of this mine will warrant the outlay of the adventurers.

At a meeting of the adventurers, held at Liskeard, on the 22d ult., from the accounts it appeared that the total labour cost, and merchant's bills for June, July, and August, were 487l. 18s. 5d.; and that the balance against the company to the end of August, was 51l. 10s. 1d. It was, therefore, resolved that a call of 2l. per 256th share be made payable immediately.

## HEROD'S FOOT MINE.

On Thursday, the 22d Oct., a new engine, 40 inches cylinder, commenced pumping this mine. The engine-shaft is about fifty fathoms deep, and it is expected that the lifts will be dropped, and the mine in fork to the bottom in a very short time. As the old levels are not of any great extent in any direction, there has been no cross-cutting, and the extent of the levels on the course of the lode is only about seventy fathoms in both directions—that is, south and north, and even from this small piece of ground, a great many thousands of pounds worth of silver-lead has been raised and sold—so that there is reasonable expectations of returns from proving the lode further; in fact, the last party only knocked the mine on account of the insufficiency of the water-wheel, and spent a great deal of money in erecting another at about 400 fathoms distance from the shaft, which never succeeded, for they never saw the bottom of the mine afterwards. The present set is a very extensive one, being about three-quarters of a mile on the course of the lode, and about that distance from east to west. The lode has been opened upon in the next valley, and presents very fine gossan, with plenty of muddle, a good indication of metal beneath; but as the water prevents sinking, it will be a good plan to extend one of the levels as fast as possible towards it. The water power is about to be employed in drawing the stuff by a water-whim now building, and there can be little doubt, if the present economical management is continued, that she will be a paying mine before many others in the Liskeard district.

## CARADON COPPER MINING COMPANY.

Liskeard, Oct. 22.—The engine-shaft is now sunk twelve fathoms below the adit level. The shaft being so very wet, we have been obliged to cut a platt at this level, and put in a cistern to take off the top water; but this will enable us to sink the shaft to much greater advantage. The lode in the engine shaft at present is from seven to eight feet wide, composed of black jack, prion, soft spar, and some black and yellow ore. This lode has been seen by many experienced miners, and considered by them to be of the most promising appearance, and well worthy of an extensive trial. Six fathoms north of the above there is another large kindly lode, which, from its present underlay, is expected to intersect the lode now in the engine-shaft at the thirty fathom level. Thirty fathoms further north, there is another lode, of a very promising appearance, about two feet wide, and the ground about it very easy for driving. It is intended, as soon as the work is got ready in the engine-shaft, to drive east at the twenty fathom level, through the lode where the black jack has been found, and I am of opinion that this speculation will well reward the adventurers for the outlay.

## WHEAL TRELAUWY MINE, IN MENKENOTTE.

The lode in the twenty-two fathom level, north of the shaft, is three and a half feet wide, worth 25l. per fathom; in the same level south it is four feet wide, worth 20l. per fathom. In the twelve fathom level north the lode is two and a half feet wide, worth 18l. per fathom; in the winze sinking under this level the lode is three feet wide, worth 20l. per fathom; the winze south of the shaft is holed to the twenty-two fathom level. The stopes are also looking very well, and we are bidding fair for the 100 tons against the time stated in my last report. As to the new lode that has been talked of, we are sinking on a something, and are down about three fathoms, and shall sink two or three fathoms more on it, just to see the appearance of it at that depth.

## TRELOGGAN MINING COMPANY.

Oct. 23.—At the account meeting, held this day, the cost for five months, from May to Sept., appeared to be 193l. 4s. 6d., which, added to 159l. 19s. 1d. balance against the mine last account, made the debts 353l. 3s. 7d. Deduct the call of 1l. per share on 256, less 39l. not collected, and it leaves the mine still in debt 314l. 3s. 7d., to liquidate which, and to further prosecute the mine, a call of 1l. per share was made.

## HAWKMOOR MINING COMPANY.

Nov. 4.—I beg to inform you that the lode in the western engine-shaft is about twenty inches wide, composed of gossan, spar, and muddle, with spots of black and yellow copper ore. The lode in the fifteen fathom level, east of Hitchen's engine-shaft, is about fifteen inches wide, composed of spar and muddle; and in this level west the lode is about eight inches wide, chiefly capel and spar. We have cleared and forked about three fathoms in the south engine-shaft in the past week. PHILIP RICHARDS.

## LANIVET CONSOLS MINE.

The report of the 31st ult. states that the work for November, and the tribute for November and December, were set at reduced rates, partly owing to improvement in the price of copper, and partly to more spirited competition. The seventy fathom level has been driven east about five fathoms, through a course of ore, varying from two to three feet wide; the seventy west has been extended about four fathoms through a large and kindly lode, not rich, but it is expected that the most productive part is on the other side, which will probably be cut into this month. The sixty and forty fathom levels remain as last reported. The quantity of copper ore raised in September and October will be about 250 tons of good quality, which will leave a handsome profit.

## CALLINGTON MINING COMPANY.

Nov. 3.—I beg to inform you that we have done, but little, by way of sinking, in the north engine-shaft, for the past week, the men having been principally engaged cutting of bearer holes and cistern platt at the ninety fathom level, in order to fix a lift there; driving north and south at this level the lode is small at present, being pretty good, and the ground soft—the backs will set at a moderate tribute. The seventy fathom level, and winze sinking below the same, still continue to open good tribute ground. In the 100 fathom level, driving south of Johnson's engine-shaft, we have a hard bar of ground, the same driven through in the level above, the lode is much disordered, producing silver-lead ore; one of our best shoots of ore gone down in the ninety fathom level, is to the south of this; in the same level (the 100), driving north, we are opening tribute ground. In the ninety fathom level, driving north, the lode continues of a very promising description, leaving backs that will work at a low figure; in the south end the ground is soft, the lode mostly composed of flokan, with spar and silver-lead ore. In the eighty fathom level, driving north, the lode is one foot big, carbonate of iron, intermixed with silver-lead ore. We expect the new winding-engine to be in course of working by the time you will receive this. J. T. PHILLIPS.

## SILVER VALLEY MINING COMPANY.

Nov. 3.—I beg to say that the north tin lode, in the adit end, driving west, is two feet wide, composed of capel, spar, and peach; in cutting into the north side of the level we have discovered a branch which is approaching the lode going west, and will form a junction with it about six feet from the present end; and, judging from its appearance, it will greatly improve; the lode is about one foot wide, composed of spar and peach, with a branch of prion on the north side containing tin. There are now three pairs of engineers busily engaged putting the remainder of the engine together. We shall lose no time in getting everything in order, and will next week state the day when she will be set to work. S. RICHARDS.

## YEOLAND CONSOLS MINING COMPANY.

Oct. 25.—As it regards the appearance of this mine, I beg to inform you that G lode, at the thirty, west of Croker's shaft, is two and a half feet wide, composed of peach, spar, and muddle, spotted with ore. This end is now about six fathoms from the shaft, or west of cross-course; and the lode therein at present has both a regular underlie and course, and has lost that confusion which it showed when nearer the cross-course. The eastern end, at the same level, is about the same distance from the shaft as the former; but the lode therein shows more ore, though it is not so large—say about eight inches—of which peach is the prevailing portion. In the adit level, east of the cross-course, and above the said thirty, the lode, about ten or twelve fathoms from the cross-course, is large, and composed principally of the same substance, with this exception, that, at the adit, it is spotted with black ore, whereas at the 30 the ore is yellow. Croker's engine-shaft is sunk nine fathoms under the 30; and, when three fathoms deeper, it will be advantageous to cut a platt, and fix a standing lift, from which to sink with as little delay as possible to the fifty, before we again open much on the lode, unless an improvement takes place in either of the thirty fathom levels. Provided the ground continues throughout just as it now is, probably something less than six months will complete this piece of work. The adit level is extended north on the cross-course about sixty-six fathoms from G lode, being just the distance that Croker's and G lodes are, where seen in the adit levels about eighty fathoms further east; and if their courses are parallel, we ought to meet with Croker's lode, at or about the point that the end now is. However, for the last six or eight feet driving, the end has passed through, and still is passing through, a confused piece of ground, consisting of muddle, spar, a little gossan, killas, &c. This may be considered a large lode, in a broken-up and confused, coarse state; but whether it may hereafter be proved to be Croker's lode, or otherwise, cannot now be determined; especially as we have never driven on its course, but merely cut through it in the adit level, and therefore its bearing is not actually known. T. TRELEASE.

## TOKENBURY MINING COMPANY.

Oct. 25.—I beg to hand you a rough report of the appearance of this mine. D lode at the twenty (west of D shaft) is about three feet wide, consisting principally of quartz and peach, together with muddle and spots of black and yellow copper ores; and though, at this point, we are more than sixty fathoms from the surface, still the lode occasionally produces gossans, accompanied with black ores. At the said twenty fathom level, the cross-cut north of D shaft, extending towards E lode, is now about seven fathoms north of the shaft; and by a rough calculation, say three from E lode. This, provided the ground continues hard, as it now is, will take two months from this date to complete. For the last two months, this end has been passing through a large vein course in an oblique direction; at present there are appearances of granite in the west side thereof. The deep adit level, extending south of A lode on the cross-course, has been driven, since last meeting of adventurers, about six fathoms; in the last week, a lode of small dimensions has been discovered therein, the greater part of which is spar; but it also shows good spots of yellow copper ores. At the same level, about thirteen fathoms north of this lode, an end is extended west on A lode, say twelve or thirteen fathoms; for the whole distance the lode has proved large, and rank with muddle, especially so for the first few fathoms, and not without ore. It is very probable that discoveries may be ultimately made at this level—though, at present, A lode does not particularly promise it. For this reason, the men now employed in these two ends may, in a week or ten days, be removed thence to the fifty-five fathom level, by first driving north to cut the other part of E 3 lode. Croker's engine-shaft is now at a depth from surface of about eighty fathoms—at which level, say fifty-five under adit, we have of late discovered, in cutting the whim-platt, the lode that inclined south of the shaft, about four fathoms above. In the platt, it will average in width about a foot, producing a small quantity of ore. It has again changed its underlie, from almost perpendicular to that of about twenty inches in the fathom; and in all probability, we shall again have the same in the shaft, soon after we commence sinking under the fifty-five, which will take place shortly, say in a week or ten days. The forty-two fathom level is twelve fathoms west of Croker's shaft, driven on the north part of E 3 lode, which is at present about eighteen inches wide, composed of peach, quartz, muddle, and yellow copper ores. It has now a very kindly appearance, and I expect the next taking down of the lode will be with saving. THOS. TRELEASE.

Liskeard, Oct. 28.—At a meeting of the adventurers, held this day, the accounts having been seen and allowed, it was resolved—That a call of 3l. per 1-128th share be now made, payable immediately at the Devon and Cornwall Bank, Liskeard.

## WEST WHEAL JEWEL MINING ASSOCIATION.

Nov. 3.—The ground in the 115 cross-cut is very hard—driven in the past month, 1m. 1 ft. 6 in. In the 100 fathom level south we have cut Wheal Jewel lode in the past week, 18 in. wide, promising for ore—driven, 1m. 2 ft. 6 in.; in the 100 fathom level west, on ditto, the lode is nine inches wide, containing stones of ore—driven, 3 fms. 2 ft. In the eighty-five fathom level west, on ditto, the lode is worth 7l. per fathom—driven, 2 fms. 3 ft. In the seventy fathom level west, on ditto, the lode is worth 6l. per fm.—driven, 2 fms. 3 ft. 6 in.; the ground in the seventy cross-cut south is still favourable for driving—driven, 3 fms. 4 ft. 6 in. In the eighty-five cross-cut north the ground is still favourable for driving—driven, 3 fms. 5 ft.; the ground in the south cross-cut, at the same level, is much the same as when last reported—driven, 3 fms. The thirty fathom level east, on Morcom's lode, is two feet wide, composed of spar, muddle, and stones of ore—driven, 1m. 3 ft. The twelve fathom level west, on Tolcarne lode, is two feet wide, containing occasional stones of tin—driven, 1m. The eighty-five fathom level west, on the south branch, is one foot wide, very promising for ore—driven, 2 fms. Wilkinson's engine-shaft is now down to a thirty fathom level—the lode is three feet wide, composed of spar, muddle, and stones of yellow ore—sunk, 1m. 2 ft. 9 in.; we set on Saturday last to cut a platt at this level; the deep adit west, on the same lode, is one foot wide, unproductive—driven, 2 fms. 0 ft. 3 in.—S. LEAN. R. JOHNS.

## EAST TAMAR CONSOLIDATED MINES.

Nov. 3.—I again beg to hand you a report of the above mines. At Whitson, we have cut down and secured in Hitchen's shaft two fathoms. We have cleared about five fathoms more north and forty fathoms south in the adit level, at the south shaft, where we find some whole ground, with branches of silver-lead ore. At Furzehill, the engine-shaft is cut down and secured about two fathoms. We have cleared up Charlotte's shaft down to the back of the next level, where we have discovered some more whole ground standing, which will set on tribute. The pitches are looking very well. Our tributers are getting wages. We are getting on as well as can be expected in our dressing department; we shall be ready to sample off by the end of this week upwards of twenty tons of silver-lead ore. B. ROBINS.

## TRELEIGH CONSOLS MINING COMPANY.

Nov. 1.—In the ninety, east of Christie's, the lode is eighteen inches wide, looking kindly, with stones of ore; in the ninety, west of sump winze, the lode is four feet wide, worth 28l. per fathom. Garden's shaft, below the eighty, is sinking in the country; the eighty cross-cut, north of ditto, is suspended. In Good Fortune shaft, below the seventy, the lode is four feet wide, rather more kindly, producing stones of ore; in the seventy fathom level, west of Good Fortune winze and rise, the lode is two and a half feet wide, but little mineral. In the sixty, west of ditto, the lode is two feet wide, worth 12l. per fathom, disordered by a cross-branch. In Symons's shaft, below the fifty, the lode is twenty inches wide, producing good stones of ore; the fifty cross-cut, north of ditto, is driving in the country; in the fifty, west of Symons's, the lode is two feet wide, saving stuff, but not rich for mineral. In the winze, below the thirty-four, west of ditto, the lode is small and unproductive. In the twenty, west of ditto, the lode is three feet wide, kindly, but little ore. In the adit, west of ditto, the lode is two and a half feet wide, and has a very good appearance, worth from 5l. to 6l. per fathom. The twenty, on the north lode, west of Garden's, is suspended for the present. W. SYMONS.

## HOLMBUSH MINING COMPANY.

Nov. 4.—In the 110 fathom level, west of Hitchen's shaft, driving south on the slide, the ground continues favourable; in the stopes in the back of this level, west of Hitchen's winze, the lode is eighteen inches wide, and worth 32l. per fathom; in the stopes east of ditto the lode is eighteen inches wide, and worth 25l. per fathom; in the stopes west of the sump winze the lode is twenty inches wide, and worth 30l. per fathom. In the 100 fathom level west the lode is small and poor; in driving north at this level, the lead lode is fifteen inches wide, producing stones of lead in places; in the south level the lode is eighteen inches wide, and worth about 4l. per fathom; in the stopes in the back of this level the lode is one foot wide, and worth 12l. per fathom. In the winze in the bottom of the ninety fathom level the lead lode is one foot wide, at present poor. In the sixty-two fathom level west, during the past week, we have opened into a cross-course, containing stones of lead, and hope to be able to report it more fully next week, after being cut through. In the rise against Bray's shaft, in the back of the eighty fathom level, the lode still continues divided into branches, containing good stones of ore in places. The tribute department, on the whole, is turning out well. We weighed at quay, on Friday last, September ores, 85 tons 15 cwt. 2 qrs. J. RICHARDS.

## UNITED HILLS MINING COMPANY.

Nov. 4.—In Williams's shaft the lode is two and a half feet wide, good ore. In the eighty fathom level east the lode is four feet wide, ore throughout, of fair quality; west the lode is three and a half feet wide, producing but little ore. In the seventy fathom level east of eastern shaft, the lode is one foot wide, six inches good ore; west of diagonal shaft the lode is three and a half feet wide, eighteen inches ore of low quality; west of James's the lode is three and a half feet wide, producing some good stones of ore; in the diagonal shaft the ground is still very hard for sinking. In the sixty fathom level east the lode is two feet wide, one foot ore of average quality; west of Harper's winze the lode is four feet wide, ore throughout, of fair quality. In the fifty fathom level the ground is much harder for driving than when last reported. At Wheal Sparrow, in Gibson's shaft the ground continues hard for sinking. In the fifty fathom level the lode is two feet wide, ore throughout, of average quality. In the forty fathom level east the lode is three feet wide, eighteen

inches ore of fair quality; in the west end the lode is two feet wide, producing but little ore; in the winze the lode is eight inches wide, good ore. In the thirty fathom level, in Richardson's shaft, the lode is eighteen inches wide, producing some ore of low quality; west of ditto the lode is also eighteen inches wide, coarse in quality. T. TREVEEN. R. WILLIAMS.

## FOREIGN MINES.

ALTEN MINING ASSOCIATION.  
Estimate of Ore for the month of September, 1845.

Mines.	No. of Men.	No. of Fathoms.	Aver. prod. per fm.	Estim. total quantity of ore.	Per cent.	Copper.
Raipas	22	131	4.6	600	51	3.15
United Mines	8	8.3	3.0	250	5	1.25
Ryper's	10	10.0	1.3	130	6	0.78
Mancour's	12	5.4	1.9	100	5	0.50
Old Mine	—	—	—	180	48	0.81
New Lodes	—	—	—	20	5	0.10
	52	268	—	1380	—	6.99

Mining Report from the 12th to the 30th September, 1845.

Raipas.—We have been disappointed in the expectations held out in the beginning of the month, of an increased produce; this has arisen partly from the bad quality of the powder and steel we have latterly been obliged to use, and partly from the deterioration of one of the stopes in the shallow adit workings, which has subsequently been suspended. The improvement alluded to in the note appended to my last report has been, and still continues, fluctuating. Several small veins of rich purple ore have been intersected, but none of any great extent; the appearance of the lode is extremely promising, but not rich; the whole of the ground passed through is ore, and will ultimately make good stopes. The stopes in the ten fathom workings, and shaft No. 1, continue to yield good dredge ore, and those in the shallow adit, with one exception, have undergone no change. The new stopes, No. 6, will be set in the course of a day or two, to work on some of the small purple ore veins, originally discovered in the level No. 4, and we hope thereby to increase our produce for October. In turning over the old adit heaps, we have found a small quantity of ore; the principal parts of the halvans consist of smalls, which have been assayed, and found to contain 24 per cent. of copper; we shall endeavour to discover some method of turning these to account; even in their present state, without any mining or other extra cost being required, and the carriage of the ore having been contracted for at 24 skillings per vog, for the ensuing year, I think they would leave a trifling profit on the smelting charges; as it will now be impossible to carry on any ore-dressing operations before the spring of next year, we have sufficient time to consider of the best method of returning the stock of halvans at this mine.

United Mines.—One of the stopes has deteriorated, and the other improved. The improvement has taken place in No. 2, above the forty fathom level; in No. 1, above the railroad, we have sufficient ground left for two months' working, or, perhaps, until the end of the year. There is, at present, no prospect of our being able to increase the produce of these mines, but I do not anticipate any material decrease for the next three months. The whole of the produce for this year has been delivered to the smelting-house, and corresponds very nearly with the estimates.

Mancour's.—A trifling improvement took place in the roof stopes, which is now very near the surface; about fourteen days work will excavate the whole of the ore in this part, after which the men will be employed on stopping the bottom of the level. The lode, in the adit level, is very hard and compressed, but still contains some good dredge ore. The sink is very much deteriorated; the lode continues large but very poor, and having latterly become wet and expensive for working, it was thought advisable to suspend its further prosecution for a time, and employ the men on a side stopes near the adit; this working will be found in the list of settings for this mine under No. 3.

Ryper's.—The stopes continue good, and the lode has now assumed a more defined character. In the course of the present month, I expect we shall be obliged to alter stopes No. 2 to a level, as the lode will be too confined to stopes advantageously. In stopes No. 1, another lode appears to have been intersected; if this should be found correct, it will make a considerable addition to our present resources.

Old Mine.—The returns from hence consist principally of stamps' stuff; the dredge does not at present exceed 4 or 5 tons, of 44 or 6 per cent. monthly.

New Lodes.—In consequence of our stock of powder having been exhausted, we have only been able to collect and dress the whole of the ore broken last month, and which will be delivered to the smelting-house in the middle of October.

Ore Dressing.—The weather has been more favourable than we anticipated, and we are still able to work the stamps to its full extent. All the last year's halvans and smalls have been cleared up, and the last delivery for this year has now been made to the smelting-house. We shall continue stamping the old mine halvans, until the winter sets in; but the returns of ore therefrom cannot amount to many tons. The whole of last year's produce, with the exception of a few tons of ore, at Quannig, and the new lodes which have been taken as stock at the mines, has been delivered to the smelting-house, and assayed, and I expect the total deliveries will be found equal to, if not a little above, the estimates for the year. S. H. THOMAS.

## FERRIAL BRAZILIAN MINING ASSOCIATION.

Nov. 13.—The water-wheel at Catta Preta is in order in its new position, and the rest of the machinery is in a state of forwardness. The water still prevents our touching the lode at Thomas's shaft. At Santa Antonio, the new shaft has been sunk about three fathoms, but it has not yet reached the depth necessary for exploring the lode. A cross-cut has been extended to the lode (if lode, indeed, it be) at the eighteen fathom level, from Gibbes's shaft, and it shows a few fine particles of gold, but not sufficient to afford much encouragement, and I fear that, after seeing a little more of it, this part of the mine must be abandoned. The rise from the adit level towards the quartz lode, near Brightman's shaft, has yet disclosed nothing new, and, from imperfect ventilation (now remedied), the progress has been slow. We are now driving from the adit level towards that part of the soft formation said to have been formerly very rich, and for which object alone this level was commenced by Mr. Crickett. I am sorry to say the mine presents but little to need remark. Some small breakages continue to interrupt our progress in the seventy fathom level, at Vesey's shaft, and we defer a thorough repair until the drought shall have exhausted our tanks of spare water. The cross-cut north, at the forty-eight fathom level, has been suspended. Some good samples have been found in new places near Duval's shaft, but hitherto the produce from these spots has been very trivial. We are preparing to drive the twenty-one fathom level westward from Blamey's shaft, beneath Senor Luiz Soare's old workings, east of Catta Gallo.

It certainly will be extraordinary if it should prove that your first researches were directed to the only rich spot in your vast domain. We have a small force constantly employed in exploring; they have already found two or three places considered worthy of trial, although their appearances are not remarkable enough to require description from me. Every possible dispatch is used in our operations at Catta Preta, and we hope to have the pumps at work about the end of this month. Previously to your directions for the preparation of a plan of the works there, Captains Treloar and Pengilly had surveyed them, and a plan was in progress. W. J. HENWOOD.

DEVON AND COUNTRY CONSOLS, NEAR TAVISTOCK.—About three fathoms have been driven on a good copper lode in the deep adit, when the ground became disordered by a cross-course; but this was passed through by a few feet driving, and the lode was found to continue regular and productive. The adit end is being driven on its course, four feet wide, without any north wall, ore throughout, with a leader of rich copper ore about ten inches wide, and improves as advanced on, and from what has been seen, we may reasonably anticipate a valuable discovery, especially as the great gossan lode has been sunk on, to the depth of eight fathoms, at about twenty fathoms east of the new engine-shaft; but which has been suspended in consequence of the increase of water, and have, therefore, commenced driving a cross-cut north from the engine-shaft, which will intersect the lode sixteen fathoms deep, and drain the great gossan lode to that depth. The eight fathoms, which have been sunk on the lode, is perpendicular, and the whole size of the shaft, without any appearance of the walls of the lode, through a solid mass of beautiful copper gossan, which is considered by all practical men, that have visited it, as one of the most extraordinary lodes ever seen—so strongly corresponding with its rich neighbour, Wheal Maria. The great gossan lode has been seen on the back for upwards of 400 fathoms, and presents one uniformity throughout, resembling that in the deep adit, so impregnated with ore.

HARROWBARROW CONSOLS, NEAR CALLINGTON.—The deep adit end is holed to the valley shaft; there is a branch of the lode which the former company left standing, which is found to be very good work. It was intended to have put up a small portable engine, for the purpose of forcing the water, but this is abandoned for the present, which will enable the adventurers to ascertain to what extent the engine in course of erection will drain or benefit this set. At a meeting of the adventurers, held at Plymouth, on the 24th ult., in answer to a proposal made for trying the effect of steam power on the mine, it was determined, after due consideration, that it should not be entertained until the effect of the engine, now being erected at Harrowbarrow Old Mine be ascertained. It is supposed that this engine, which will be situated about 200 fathoms from the Brewer's shaft, in Harrowbarrow Consols, will fork the water in this shaft; and if so effectual work can be done on the St. Vincent lode, in this shaft, which is known to be a rich one—ore having been raised there in valuable quantities, when the old workers were obliged to abandon the shaft in consequence of the water.—A call of 5s. per share was then made, and instructions given to carry on the deep adit level to the Valley shaft, from which a cross-cut is driven upon the Wheal Brothers copper lode, where it is to be seen, with a silver-lead lode, running parallel to it about two feet off. Some ore from the latter has been assayed, the result of which is that it contains 117 oz. of silver to the ton of ore, which, after deducting returning charges, promises a



handsome return, so that this lode will be driven upon and improved. It was not practicable when this lode was discovered to speak with certainty as to its size, &c., but we shall be enabled in a short time to supply a proper description of it, as well as to afford information with respect to Wheel Brothers lode.

**WEST SETON MINE, CAMBORNE.**—This mine lies to the west of Wh. Seton, North Roskear, and East Croft Mines, and bids, at no distant period, to become a productive sett; the shaft is dry, and sinking under the twenty-six fathom level, below the adit, on a large and promising lode. The pitch in back of the twenty-six fathom level is improved since last taken, and the junction of this lode with a caunter is expected in driving a few fathoms west. As no cross-course exists between the ends in Wheel Seton and this mine, shares may become very valuable within a short period, more especially as the latter mine was never so promising and productive as at the present time.

**HARROWBARROW OLD MINE.**—In the deep and shallow adits of this mine some good silver work is being raised by tributaries. Every preparation is making for a mine; the bob and boiler are on the mine, and the residue of the engine is expected shortly. Considerable delay has been experienced here, in consequence of the founders being unable to complete their contract within the limited time; but the engine is expected to be at work in about six weeks from the present time. At a meeting of the adventurers, held at Plymouth, on the 25th ult., it was resolved, "that the defaulting shareholders be written to, inquiring whether they intend retaining their interest, and, in the event of no reply being received in seven days, their shares to be forfeited."

**WHEEL MARY, IN CALSTOCK.**—This sett contains a large and very promising lode, from which is raised some coarse dredgy work, but the water-wheel is incapable of keeping her in fork, in consequence of the falling off of the surface water during the present dry period; but the time is fast approaching when more will be seen of this flattering lode.

**GREAT WHEEL WILLIAMS.**—This mine is being pursued under very encouraging appearances. There is a good-sized lode near Cross Park shaft, and preparations are making to cut it at the ten fathom level. Another lode has been found in the north part of the sett, of which much cannot be said at present, more than that it has a very fine back.

**CANADON WHEEL HOOPER.**—The engine continues to work well, and they are progressing satisfactorily with the engine-shaft. Much is anticipated from the sawpit lode, which, in a short time, will be more fully developed; it is about 5 feet wide and underlying south, with a back of beautiful strong gossan, being north of the shaft, which is expected will fall into it at about thirty-five fathoms.

**CANADON CONSOLA.**—A very rich copper lode has lately been cut in these mines, and the agents in the neighbouring setts are exerting themselves to trace its run.

**NORTH POOL MINE.**—In this valuable sett, to the east of East Croft and North Roskear Mines, there has been discovered, for upwards of fifty fathoms in length, a good course of copper ore, which yielded, in July and August months, 117 tons, and September and October 102 tons, of good quality ore; and it is expected an engine can be erected without further calls on the adventurers. The lode is proved to be productive on each side of the cross-course, which has made so much ore in Carn Brea, Tincroft, East Pool, and South Basset Mines. It is divided into 100 shares, which are well held, and in demand.

**ST. TRATH.**—The lead mines in this neighbourhood are likely to become of considerable importance. Some new discoveries have been made, and the veins are rich both in silver and lead—it is said, equal to Trebrugat Mine, which was worked to such advantage some years since.

**TREVENNAN.**—The adventurers in this mine have decided on erecting a powerful steam-engine, which will put the mine in full work, and greatly benefit the neighbourhood.

**WEST WHEEL TREASURY.**—I am happy to inform you this mine is looking very well indeed. We sampled 110 tons of ore, worth about 600*l.*, and the like the following two months—no doubt of this leaving a handsome profit; we never exceeded thirty tons in two months before. The account was held yesterday, and a call of 3*l.* made, to pay five months' cost, which makes 12*l.* 10*s.* paid from the commencement—15*l.* and 20*l.* have been given per share, the purchasers paying the call. Several agents were underground yesterday, and said shares were worth 30*l.* each, and it was highly gratifying to observe adventurers in such high glee and spirits, as was the case yesterday.—October 22.

**WHEEL ANDREW AND NANGLES MINE.**—This mine is looking much better in the seventy fathom level, and seventy-four tons of good ore have been sampled, the produce of the last two months, and the mine is looking more promising than ever. Shares can be obtained in this mine for 80*l.* each, yet, a short time ago, they were in much demand at 100*l.* This mine lies contiguous to the United, Consolidated, and Wheel Clifford Mines, and has thirteen distinct lodes in the sett.

**SOUTHERN CONSOLA, NEAR OKELIAMPTON.**—The lodes in this sett continue to present the same promising appearance, possessing all that a miner could desire, without a course of ore; the engine-shaft is gone through the lode, and they are now driving the ten fathom level to cut the lode at that depth; it was their intention to sink on the course of the same, but the want of timber precluded it; the ground is favourable for sinking, the work being performed at 3*l.* per fathom.

**TRIFNO.**—William Vice, Esq., has lately erected a steam-engine, and several lodes of tin and copper are said to have been discovered.

**BLTTON, NEAR GAINSBOROUGH.**—While excavating for the railway through the limestone hill at this place, the men discovered a mineral, called in Yorkshire "mounding"—we presume, the sulphuret of iron, or mundic—an almost sure indication in the limestone formation of copper or lead ore at greater depths.

**SOUTH HARVANNAH MINE.**—We have seen a specimen of tin from this mine, which we consider to be perfectly unique, consisting of one semi-transparent crystal of a resinous appearance, weighing about nine ounces. The party who obliged us with an inspection of this splendid specimen, informs us that the tin raised in this mine generally partakes of this peculiar character. Although but five fathoms below the adit, no such crystal as this has hitherto been discovered. The general quality of the tin may be inferred from the fact of the fortunate shareholders always obtaining the best price in the market. Their fourth sale, which took place a few days since, realised 59*l.* and 60*l.* per ton. The mine, although thus flattering in its prospects, has only been in work about 18 months. It is situated in the parish of Altemun.—*Plymouth Journal.*

**SINGULAR DEPOSIT OF TIN ORE AT NANGIZELL COVE, NEAR THE LAND'S END.**—Mr. Carne drew a paper, at the Royal Geological Society of Cornwall, on this subject. Nangizell Cove is situated between Tol Penwith and the Land's End; on the very edge of the cliff is a stamping-mill for pulverising tin ore, worked by a water-wheel. On looking round the Cove, and the hills which bound it, the visitor discovers no appearance of a mine in all the neighbourhood; he soon perceives, however, two spots on the slope of the hill, where small heaps of rubbish intimate that an attempt at mining may have been made; but there is no shaft, no adit, no machinery of any kind. At the most eastern spot an excavation has been made in the side of the hill, having the appearance of a stone quarry. The whole country is granite, and at the end of the excavation appears a mass of black schorl rock, which contains tin, and, by blasting, a considerable quantity has been separated, and has been pulverised by the stamping-mill. The schorl rock is a mixture of schorl and quartz, in which the former greatly predominates—as hard as flint—while the granite which incloses it is comparatively soft. Had the mass of schorl rock been continuous, it would appear like a north and south vein, as it does not incline more than three feet in a fathom; but as it seems only an insulated mass, the miners call it a floor; it is visible for about twenty feet in height. In the highest part of it which can be seen, it is about seven feet wide, but it spreads out to at least sixteen feet in the lowest part. At the second heap of rubbish is another similar deposit, which the miners have pursued about 100 feet into the hill, and have found it from one to eight feet wide, inclining at an angle of fifteen degrees from the perpendicular. When the present miners commenced their operations, there were evident marks that the spot had been wrought by others long before, who probably followed the floor as long as they found tin in it. The present workmen have pursued the floor into the hill; they have found the extent of the schorl rock above and below them; they are still, however, following it northward into the hill, but southward, in the rocks of the perpendicular cliff, there is no appearance of either of these floors; had they been veins, they must have intersected the rocks. No veins have been discovered in the direction of the floors, but there are several minute veins crossing the schorl rock, and where they intersect it, it is most productive of tin. These small veins, therefore, seem to occupy the same place, and to perform the same office to the schorl rock as feeders do to the regular veins. The masses of schorl rock appear to be contemporaneous with the granite. How far the tin was of the same age, was a question which Mr. Carne would not undertake to decide.

**IRON TRADE IN NORTHUMBERLAND.**—Messrs. Bolekov and Vaughan, of Middlebrough, have lighted the fires of two furnaces at Wotton Park Iron Works, and will shortly have a third furnace ready for lighting; by Christmas the whole will be in full blast. The ironstone is to be supplied principally from Wearside. At Towlaw, other furnaces are being erected by Mr. C. Attwood.

**OFFENCES IN THE MINING DISTRICT.**—The monthly summary of offences in the mining district for the month of October last presents, we are happy to state, a decrease, compared with the preceding month, under several heads of offence. Only one case of robbery presents itself, but under the head of larceny there is an increase of two. There have been two less convictions for assault, and in riots there is a decrease of eight; the cases of intoxication are eight less, and the complaints against beer shops have diminished by five. Offences of misbehaviour in service there is an increase of six, and of disorderly conduct seventeen, while of actual breaches of the peace the diminution amounts to twenty-one. No robbery committed in the Wolverhampton division, reported at the station, remains undetected.—*Wolverhampton Chronicle.*

## ATMOSPHERIC RAILWAY GAZETTE.

**DISCOVERY OF COPPER ORE NEAR TAUNTON, SOMERSETSHIRE.**—Some twenty years since, a workman employed on the estate of Andrew Croose, Esq., (the celebrated electrician), brought to that gentleman a piece of hydrous peroxide of iron, which he had picked up in a lane on the estate. Mr. Croose, thinking it might have been broken from the back of a copper lode, accompanied him with a pickaxe to the spot, at the foot of a hill which rises 400 feet within the distance of half-a-mile. There was a confused appearance in the strata on each side of the lane; and at the first blow of the pickaxe, he brought up a large piece of grauwacke slate, impregnated with carbonate of copper. On the next day, two labourers were employed to open the ground on each side of the lane, and they took out pieces of copper pyrites (sulphuret of copper) as large as eggs. Two miners were immediately employed, who sunk a small shaft about twenty feet deep, taking copper pyrites all the way, interspersed with the hydrous peroxide of iron. It was, however, given up as too expensive; where a highly respectable Cornish agent called on the proprietor, and offered to follow it up at his own expense, or those associated with him. Accordingly, an adit was driven about thirty-five fathoms into the hill, in a northward direction; and at that distance from the mouth, and forty fathoms from grass, a somewhat irregular copper lode was cut. On this, they sunk a perpendicular shaft about forty feet; from the bottom of which a single stone of pyrites was taken, weighing 81*l.* lbs., containing full 20 per cent. of copper, and a considerable quantity of ore was raised. This was twenty years ago, and the mine has been ever since abandoned, until May last; when many applications being made to work the sett, Mr. Croose and some neighbours agreed with a gentleman of experience to give it a fair trial. They have cleared up the old adit with much difficulty, it being a soft killas, and requiring a deal of timbering; sunk a new shaft of forty feet deep from adit, to cut the lode; and have only been able to sink on it twelve feet, owing to the water; they have also driven several fathoms on the lode, which is large and regular. They are now about to erect a small steam-engine of twelve-horse power, which will go to work in a month; and in the meantime, they are continuing to drive east on the lode, and prosecuting the adit north, in hopes of cutting parallel lodes.—We have noticed, in a former number, the fact of this copper lode being discovered in the parish of Broomfield, Somerset; and we sincerely hope we shall be able to lay before our readers an account of profitable results from the workings now in progress.

**PENGILEY NICKEL MINE, NEAR ST. AUSTELL.**—This mine, the principal produce of which is nickel, is now being worked by a London company, and promises well for the adventurers. On gaining possession of the sett, they at once purchased and set up an engine, forked the water, and cleared out and supported the old workings, which had partially fallen together; they then commenced a spirited prosecution of the mine, and the result in three months' working has been, that the first call has paid the costs to the end of September, and they have about two tons of nickel ore at surface. This ore, we have been informed, gives, on assay, from 50 to 60 per cent. of pure nickel, and as the market price of that metal is from 6*s.* to 7*s.* per pound, this ore must be worth from 10*l.* to 12*l.* per cwt., or from 200*l.* to 240*l.* per ton—a tempting price, and one which would naturally spur on to a spirited exploration of the mine; there is a good copper lode also in the sett, but at present, we believe, not worked.

**MINING IN ALGERIA.—FRENCH EMIGRATION.**—It appears that a considerable number of workmen are making applications to the different authorities in France to be conveyed to Algeria, and there are numerous applications for grants of land; the free passage that has been given up to the present day to emigrants to this French colony by the Minister of War amounts to upwards of 6,000; and as this combines many families, it can be computed without exaggeration, at least more than 12,000 emigrants. During the last year the emigrants were principally from the departments of the Upper Rhine, the Lower Rhine, and the Jura, which furnished the greater number of colonists. This year they are chiefly from the departments of the Upper and Lower Pyrenees, the Gers, the Ariège, and other southern departments, which have the predominance over those of the north, although they have sent a great number of Germans. The grand object of those emigrating to Algeria is chiefly to work the mines of iron, copper, lead, and zinc ores, as great inducements are held out to them by the reports of the engineering authorities, although it is generally considered by the Royal Department of Mines in Paris that the mineral resources of the French possessions in Northern Africa will never yield sufficient to carry out mining operations on a very extensive scale to benefit the adventurers, as they will have very difficulty to encounter—an insalubrious climate, the want of machinery and hydraulic facilities to work in the mountains, the expense of conveyance to Algiers, Bona, and other ports, if for exportation to France to be melted, or even to the smelting establishments that may henceforth be erected in the country, but above all the attacks of the native Arabs of Ab-d-el-Kader, who will be continually molesting them in all their operations.

**A MISER MINER.**—There died lately, at Kendal, a penurious bachelor named John Stalker, a collier, who left behind him twenty-eight complete suits of clothes, most of which he had never worn; fifteen new hats; fifteen new shirts that had not been once in water; as much cloth as would make eleven others; handkerchiefs without number; nineteen tea canisters; fifteen pint cans; and a collection of pots and pans which would set up a vendor, besides a considerable sum of money which he never had the heart to expend on himself.

**THE IRON AGE.**—It is now upwards of 5000 years since Vulcan began business; but we question if he ever had so many orders as at present—never so many forges at work—never so many artificers in brass and iron—to instruct. This is, indeed, "the iron age!" But the poets were not true prophets, who sung of the miseries of mankind during that age; for Midas has touched it, and, by a most potent alchemy, has turned it into gold! Witness the millions accumulated by those men of iron, the Gustes, the Crawshays, the Thompsons, the Hudsons, and other millionaires of the present day. Industry, directed by science and skill, is, after all, the real alchemist; by exploring the bowels of the earth, and bringing up to light its mineral treasures, even of the coarsest kind, and by applying them to the commerce and convenience of human life, she enriches and improves the most extensive populations. Hence we hear it is said that coal and iron are the sources of national prosperity; taken as instrumental causes in connection with moral, we fully assent to the truth of this axiom in political economy. Everything, therefore, which disturbs the progress of these fundamental national works is to be deplored and prevented. To bring these remarks nearer home, we rejoice to hear of the discovery of coal at Ferques, in the immediate neighbourhood of Marquise; and we trust that the mine will be productive of abundance, and of good quality. The arrondissement of Boulogne ought to be a mining country, as the soil abounds in minerals; nor can we doubt that the enterprise of the present day will soon put capital into extensive operation with this view. Little do the Boulonnais know what wealth they are trampling under foot, much as they may be affected by the *auri sacra fames*. In addition to the coal of this neighbourhood, the projected iron-works at Pont Pitendal augur well for the further prosperity of this town. If iron of the best quality can be made on the banks of the Liane, what an advantage to this locality! What a source of wealth to all parties! What an attraction to other manufactures, and what a train of benefits to trade and commerce.—*Boulogne News.*

## MINE ACCIDENTS.

**Another Awful Colliery Explosion in Lancashire.**—On Wednesday morning last, the 5th instant, an explosion occurred in the coal pit of Messrs. Turner and Evans, of Haydock, near Newton, Lancashire, by which nine lives were instantaneously sacrificed, and ten other individuals so dreadfully mutilated, that there is not the slightest hopes of their surviving, excepting one, who seems to have escaped the severest part of the shock. This colliery is worked night and day; the nightmen had just left the pit (5 o'clock), and the above number of the day workers had already descended to meet their awful fate. Had it been a few minutes later, twenty more would have been in the mine, and most probably shared the same fatality. So powerful was the explosion that the planks across the shaft, with the upper casing, were blown from their position, and carried to a considerable distance. One boy was so dreadfully mutilated that his remains were obliged to be put in a sack to be got out. We have not yet heard the result of the inquest; but it is hoped a most rigid inquiry will be instituted, as the cause of the catastrophe has not transpired.

**Black Brook Colliery, near St. Helens.**—E. Mercer and J. Lawley were thrown out of the tub, while descending to their work, and killed.

**North Hetton Colliery, Durham.**—J. Brown fell down the pit, and was killed.

**Trindon Grange Colliery.**—P. Birkbeck was killed by a fall.

**Bickershaw Colliery, near Leigh.**—Wm. Smith was killed in the Ladder Pit.

**Wadsworth.**—A puddler employed at Mr. Russell's colliery, named D. Simcox, foolishly attempted to slide down the rope; when about three parts down, the excessive friction compelled him to relinquish his hold, when he was precipitated to the bottom, and nearly killed.

**Spirit Tongues Colliery, Newcastle.**—As some carriages were descending the incline, the rope broke, when they ran into the river, and injured a collier.

**John Pit, Whitehaven.**—W. Armstrong was killed by a fall of coal.

**Lamb-hill Colliery, Whitehaven.**—W. Thornton was killed by a fall of coal.

**Bughole Colliery, Wetherhampton.**—A little girl, named Eliza Owen, fell down a pit, and was killed.

**Huddershaw Colliery, near the Tandle Hills, Thorntun, Lancashire.**—While J. Mills was at his work in one of Messrs. Wild, Haigh, and Co.'s pits, some roof gave way, and killed him.

**Middle Kinnell, Paul.**—As G. Dennis was guiding a block of stone, weighing one ton and a quarter, into the cart, the chain broke, and the mass fell on his foot, which was completely crushed; amputation just above the ankle was immediately performed, and the poor fellow is doing well.

**Neath Abbey.**—As a collier, named W. Abraham, was descending the air-pit at Mr. Parson's colliery, the rope broke, and he was killed on the spot.

**Pengyryn.**—As Daniel Jones was cutting coal in the Garth level, near Languick, which is open to the farmers of the neighbourhood, a stone of half a ton weight fell upon him from the roof, and killed him on the spot.

## MINING AND RAILWAY LIABILITIES CONSIDERED.

The question has often been asked, What is the liability one subjects himself to when he enters upon mining speculations? We believe the erroneous ideas generally entertained on this subject, by parties only superficially acquainted with mining pursuits, or influenced by the bugbears the timid and the prejudiced delight in creating, have had great weight in keeping many capitalists aloof from mining, though they rush into railway speculations with an enthusiasm which, to our thinking, savours much of downright folly; and now that the railway crisis, and the fears of Parliamentary contracts, are exciting so much attention, it may not be amiss to explain the system upon which mining companies are carried on, and which will, we think, have the effect, not only of allaying any fears that might arise with those already engaged in them, but remove many of the prejudices of others.

A party taking up railway shares, and signing the subscribers' agreement and Parliamentary contract, makes himself liable to the full amount of his shares subscribed for, if not for the whole extent of his property. Let us, therefore, "look on this picture and on this."

Cornish mines, carried on upon the cost-book system, are exempt from the operations of the new Joint Stock Registration Act; and are subject to the local or Stannary laws of Cornwall, under which a shareholder can, as will be explained hereafter, at any time relinquish his shares upon paying his proportion of the debts. In forming a company, what is called a cost-book is produced, a memorandum of agreement is entered in the first page, generally in the following form:—"We, the undersigned, do hereby consent and agree to become shareholders, adventurers, and partners in the — mine, situate in the parish of —, county of Cornwall, in the shares and proportions hereunder, the entirety of the said mine being divided into 256 shares, and the mine conducted on the usual cost-book system." Under this form the parties taking an interest sign their respective names, with the number of shares taken by each; a purser or manager is then appointed, and the company is formed. At a meeting of the shareholders, a few rules and regulations for the government of the whole body are proposed and carried by the majority. Under this system, each shareholder, it is true, renders himself individually liable for the debts of the mine; but it is a part and parcel of the system, that a full statement of the debts and credits of the company should be made out, and laid before the shareholders every two months; so that the liabilities cannot amount to much, and can always be known. At these two monthly meetings, if the mine be in debt, a call per share sufficient to discharge it is made; or the contrary, if there be a profit sufficient, it is divided. Let us now suppose a case of a mine proving a failure, which will exempt to the most prejudiced the extent of mining liabilities. A, we will infer, has one 256th share in a mine, which share has cost him, including calls, £50; at a two-monthly meeting, it appears the mine is in debt £1000, with no apparent prospect of its improving. A finds, however, that the majority of the shareholders are determined to go on with the speculation; he, therefore, being unwilling to risk more money, can, under the Stannary laws, give notice to the purser that he intends to withdraw from the concern; and which he can do, by paying his proportion of the £1000 debt, and by signing his name "off the cost-book" as no longer a shareholder, and consequently not liable for any debts contracted after the date of his "signing off." If there be machinery on the mine of the value of £2000, the majority of the shareholders who carry on the concern are bound to give A his proportion of their value. Such is the end of liabilities in mining. If a shareholder wishes to part with his interest, or any part of it, he signs it over to the purchaser on a written or printed memorandum, which is either pasted or copied in the cost-book, and constitutes the transfer, and the purchaser who signs and accepts it becomes subject to the same rules, regulations, and liabilities as the seller was previous to his transferring. Nothing, we think, can be more simple or more satisfactory in regard to clearing oneself of liability.

Early prejudices, we know, like early associations, are not easily forgotten. They cling to the memory, to the disturbance even of conviction. And thus, many we could name, having heard of the early doings in mining,—when no regular system, but that of money-making, was in vogue, when science slumbered, and collusion and roguery were rampant,—have hugged their prejudices to the last, utterly losing sight of, or unwilling to acknowledge, the march of intelligence and improvement, and the checks now adopted to render abortive any glaring attempts at collusion on the part of agents and merchants, and which render mining either a loss easily calculated, or a profit sometimes too tremendous to contemplate. As an example of this latter, let us look at the Great Wheel Maria mine. At this time last year it was commenced, the market value was nothing; the outlay by the shareholders not more than £200 or £300; and now it bears a *bona fide* market value of £800,000, and is making a clear profit of upwards of £9,000 *per month*; and with ore enough already discovered, it is said, to continue this profit for years. This, though a great, is not an isolated case. Trevaun, upon an outlay of £1000, paid the shareholders a profit, extending over fifteen years, of £445,000. The East Wheel Rose Mine, upon an outlay of £6000, bears a market value, at the present time, of more than £200,000, and in about three years has paid dividends amounting to £128,000. In naming these facts, it is far from our intention to puff off any particular mine; we give them as mere instances of not uncommon occurrence, and from a firm conviction that, when judiciously selected and properly conducted, there is no species of speculation so prolific as mining. To make a railway pay even a small per centage, a million of money is often required; one stroke of a pick has often done more in mining.—*Railway Herald.*

**WHEEL PENCORSE.**—The meeting of adventurers in this mine, appointed for Monday last, is postponed until the 24th. We understand the mine is looking very well—never better.

**IRISH COAL MINES.**—For three or four years past, there has been a vast increase in the consumption of native coals, and some additional mines have been opened, within a month or two, by the Mining Company of Ireland—one in the county of Cork, and another in Tipperary. In the latter county, that enterprising company have been, for a considerable time, working the rich Slievardagh Collieries with great success, and latterly the demand has so much increased, that the coals have been drawn off as rapidly as they could be raised. The coals in this extensive field are, it appears, of a much better quality than have been usually found in Ireland, containing much less of sulphur, and being admirably suited for the kitchen, as well as for agricultural purposes. As their value has become known, there has been a growing demand from a wide district of country, extending as far as Limerick, Clonmel, Cashel, Tipperary, and Thurles. We observe, by resolutions adopted at a meeting of the directors of the Mining Company of Ireland, that they have determined to give the zealous support of the company to a new line of railway—the Thurles, Clonmel, Carrick-on-Suir, and Nenagh Central Tipperary Railway—on the ground that "it is to pass close by the extensive and productive coal-fields in the barony of Slievardagh, county of Tipperary, and thus afford great facilities for the cheap transit of the coals and culm, now so generally used for agricultural as well as domestic purposes, to a large and extensive district of the south of Ireland." At present the cost of transit from the Slievardagh Collieries to Limerick, is, we understand, nearly 1*l.* per ton, and so in proportion to towns less distant. By railway, the cost would not be more than a fourth or fifth of the present rate. The result would be, a great saving and accommodation to the public, and a vast increase of consumption, as the mining company would, of course, employ the requisite amount of labour in raising the coals. Scientific persons, acquainted with the subject, are, we are told, of opinion that the coals of this mine would be suitable for the supply of locomotive engines, and if this should prove correct, a new source of wealth would be found in our own soil. The Central Tipperary Railway is to join the Waterford and Limerick, and by this means the facilities for transmission would extend to several counties of Munster.—*Dublin Mercantile Advertiser.*

**AMERICAN IRON.**—A Liverpool merchant, who went through the American iron-works in August last, writes as follows:—"Mr. Wenslow, of Tray Iron Works, says that the owners of the Danville furnaces have contracted with the owners of the mills and forges to supply them with their pigs at \$11 per ton, or about 2*l.* 5*s.* of our money; and they have contracted for a supply of coals, which are got close to the works, for \$14, or 5*s.* per ton; and he says he has no doubt but that, in a short time, they will be able to make their pigs for \$8 per ton. You may judge for yourselves, therefore, what chance we have of long competing with these people. Charcoal blooms are now at \$50, or above 10*l.* per ton sterling." And he adds, in regard to wages—"The average wages of the workmen is about 3*s.* 6*d.* sterling per day, paid in truck at the employer's store, in provisions, clothing, &c., for which they pay 2*s.* per cent., and in some cases higher, than they would buy them for at the regular stores."

**ILLEGAL EMPLOYMENT OF WOMEN IN COAL MINES.**—At the petty sessions held at Chorley, on Thursday, the 30th ult., Mr. Tellure, of Liverpool, was fined 10*l.* and costs, for employing females in his coal mine, at Shevington, contrary to a late Act of Parliament. We understand the employment of females is of the most frequent occurrence in the collieries around Bolton, Wigan, Leigh, St. Helens, &c.

**PATENT ELASTIC PAVEMENT & KAMPTULICON COMPANY.**—We are pleased to see the progress of this little company, and we have no doubt, when the important objects for which the additional capital is required are made public, an immense value will be added to the shares, which are so small, and devoid of all liabilities, as will render investments safe and advantageous. The late experiments in the arsenal at Woolwich proved, beyond measure, satisfactory.

**MEDICAL, INVALID, AND GENERAL LIFE ASSURANCE.**—Messrs. Fuller and Marsh sold, by auction, five 50*l.* shares in this company (2*l.* paid), at 2*s.* 6*d.* each.

**ANAPHASIA IN THE TREATMENT OF CONSUMPTION.**—We understand that the dispensary for the treatment (by anaphasia) of consumption, asthma, and other affections of the chest, is removed from the Strand, to 14, Leicester-place, Leicester-square, to which place Dr. Cronin, physician to the dispensary, has removed, from his late residence, 6, Craven-street, Strand. The great relief Dr. Cronin has afforded persons labouring under the above disorders, and the cures which he has effected by his successful mode of treatment, induces us to notice his present residence for the benefit of those who may be afflicted.



Current Prices of Stocks, Shares, & Metals.

Bank Stock, 100 2  
3 per Cent. Reduced Ann., 94 1/2  
Consols for Account, 95 1/2  
Exchequer Bills, 97 1/2  
Belgian, 4 1/2 per Cent., 95 6  
Danish, 5 per Cent., 97  
Dutch, 2 1/2 per Cent., 97 1/2  
Portuguese, 3 per Cent., 97

STOCK EXCHANGE, Saturday morning, Three o'clock.

Russian, 5 per Cent., 110  
Spanish, 5 per Cent., 38 1/2  
ditto, 3 per Cent., 37 1/2  
Brazil, 5 per Cent., 81 1/2  
Chili, 5 per Cent., 33  
Colombia, 5 per Cent., 16 1/2  
Mexican, 5 per Cent., 31 1/2  
Peru, 6 per Cent., —

THE SHARE MARKET.

We have given in our present Number a more than usual amount of mining reports, and as it is evident that legitimate mining is gradually extending, we shall lose no opportunity of obtaining information of acts newly taken up, as well as the usual agents' reports of regular working, wherever they can be obtained. The two reports of meetings of the Tincroft and Larnahoe Wheel Maria will be read with interest.

This has been a week of great excitement in the share market. Money has been scarce; and a few failures, or at least temporary delays, have taken place in meeting the settlement. The panic, however, may be said to have subsided; and the speculators, who have been so long labouring under the railway mania are returning a little to their senses, as what bargains are entered into at present are with the greatest caution. On the whole, the business that has been transacted during the week has been very limited—the greater part sellers, instead of buyers—so that the market has assumed a very flat and unprofitable appearance. The weekly meeting of the Bank directors was held on Thursday last, the result of which was looked forward to with great anxiety by many of the frequenters of Capel-court. After the directors broke up, from a sitting of unusual duration, the following notice was issued: "Bank of England.—The minimum rate of interest on bills discounted at the Bank of England, not having more than ninety-five days to run, is 10.10s. per cent.—November 6, 1845." This notice from the Bank has been a heavy blow and great discouragement to the market for railway shares and scrips. All denominations of these were exceedingly flat, and it has become more difficult to sell scrip than previously. In our official list will be found the details of prices and fluctuations. As a specimen of the rapid change that has been experienced, we may observe that the favourite Dutch-Rhenish shares, which at one time could neither be had for love or money, and were thought dog-cheap at seven premium not many weeks ago, may now be had easily enough at about two premium. The setting day for the "Constituted" Great Northern of France is fixed, it is said, for Tuesday next. The return of the caution money on the French lines, when the adjudications are all decided, will produce a considerable reflux of money to this country; and the amalgamations now in progress amongst various schemes in this country, will also tend to throw more capital loose again into circulation. The last day of the present month will make, it is expected, tremendous havoc with many of the bubble companies. From the abstract of the Standing Orders on private bills in the House of Commons, we select the following:—"Deposit with the clerk of the peace, plans, sections, and books of reference, on or before the 30th November. Deposit with the Board of Trade, plans, &c., on or before the 30th of November."

How many of the railway companies, started within the present year, and but provisionally registered, will be prepared to comply with these conditions, can only be matter of conjecture, but the receding may safely be predicted as considerable one; and to that extent when the result is made, will the public mind be relieved of the apprehension which prevails of the consequences of these schemes. Another purification will take place at the end of the year, when the Standing Orders come into operation—viz., "Deposit with the parish clerk, &c., parochial plans, sections, and books of reference, on or before the 31st of December. If lands, or houses, to be taken, application to owners, lessees, and occupiers, on or before the 31st of December. Deposit in the Private Bill-office, plans, sections, and books of reference, on or before the 31st of December." A notice has been issued by the Registrar-General of the Act regulating joint-stock companies, by which provisionally registered companies are reminded of their obligations under the 4th and 5th sections of the Act 5th and 6th Victoria, c. 110, "That they are bound to register, in the prescribed form, the names, occupations, places of business, and places of residence of the provisional directors or committee, together with written consents on the part of every director or committee-man to act as such, and written agreements to take shares." They are further reminded, that the promoters (or registered solicitor) of any company, omitting to make the return within a month, after such provisional directors shall have been ascertained or determined, become liable, for every offence, to a penalty of not exceeding 20l. Thus follows a warning in these words—"And companies which have advertised lists of provisional directors, or provisional committees, for more than the above period, are warned to effect the required registration without delay." We give the above, as it, no doubt, will be read with interest. How many "provisionally registered" companies have been concocted to raise "deposits," will there is every probability, be ascertained in a short time, and then the public will be able how to discriminate the good established lines and the money-making schemes, that have been got up, during the last session, by pettifogging lawyers, Capel-court jobbers, and intriguing adventurers, so that, in future, they may be on their guard, and consider twice before they speculate once. We give the following *resumé* of the whole projects, meetings, on *dis*, and business of the week, which will show that, although the market has been depressed, the spirit of railway speculation is still very strong in nearly every part of the country, but with more caution than heretofore.

The Manchester and Birmingham Continuation and Welsh Midland Railway, according to the account of the meeting held at Llanidloes, is proceeding satisfactorily. The works to improve the harbour of Aberystwith have been already commenced. The South Devon and Bristol and Exeter Railway Companies have passed resolutions expressive of their desire to co-operate with the Great Western, and the Bristol and Exeter Railway Companies; but, at the same time, stating the determination of the shareholders not to part with their property except on fair and equitable principles; in consequence of which, a private meeting of the Bristol and Exeter shareholders—who are opposed to the ratification of the agreement for the sale of the line to the Great Western Company—was held at Bristol on Wednesday last, for the purpose of arranging their mode of proceeding, which was to be decided at a meeting convened for yesterday (Friday). It is stated that they have received a sufficient number of proxies to enable them to defeat the directors should they go to a poll, and that they will meet the proposition with a decided negative. The rumour also gains ground that the directors will place the agreement before the meeting as the best which they have been able to make, leaving the shareholders generally to determine as to its adoption or otherwise; while, however, this is the opinion of the opposing shareholders, there are not wanting persons who think that the directors will carry out the agreement. At a meeting held at Helston, favourable resolutions had been passed in support of the Falmouth, Helston, and Penzance Railway. An arrangement has been entered into between the Manchester and Sheffield Railway Company, and the Macclesfield Canal Company, for the lease of the latter in perpetuity at 2l. 10s. per share. The Edinburgh and Northern Railway Company have entered into the first contract for that portion of the line between Burnt Island and Kinghorn, and the contractors will immediately commence operations. An arrangement has been entered into by the directors of the Liverpool, Manchester, and Newcastle Junction Railway, with the principal landed proprietors, and the promoters of the Glasgow Union Railway, most satisfactory for both companies, so that henceforth the utmost harmony and co-operation will be secured in respect to the further progress of the line.

On the York and Carlisle Railway, the Duke of Cleveland has at length consented to a survey for a branch line, extending from Haggerleaze, by Langleydale, on the north-west of Raby Park, through several of his farms, and by Barnard Castle, to join the main line near to Scargill. It is expected that he will pass the Tees by a large viaduct not far from that fine old ruin, "Bernard Bilio's Castle." But that which is of the most importance is, that it will open out a direct communication with the coal-fields of Yorkshire, Westmoreland, and Cumberland, and afford opportunities for vending the excellent flags and slates which abound in the neighbourhood of Barnard Castle, with many other natural productions at present of but little avail, on account of the expense of carriage on the common roads. The arrangements for the central station at Carlisle are now nearly completed; the necessary purchase of land, &c., has been made on very favourable terms, and it is understood that negotiations are now in progress for the purchase of the gas-works, the site of which will be required for the station contemplated. Upwards of 100,000l., it is stated, have been already paid up in deposits since last week on the Leeds and Carlisle Railway. The Lancaster and Newcastle-upon-Tyne Railway is said to be a great favourite amongst the railway speculators in Liverpool, Manchester, and Newcastle. On the South Wales line, surveys and their assistants are busy prior to the issuing of contracts. The borings for the foundation of the bridge at Chepstow have been commenced. The length of the Great Irish North Junction Railway, which is a new project, is to be thirty-two miles, and will cost about 9000l. per mile; it will connect Londonderry, Lifford, Strabane, Newtownstewart, and Omagh, embracing the traffic of the county of Londonderry, and a great part of Donegal, Tyrone, and Monaghan, with the north midland districts and Dublin. The *Gazette* contains notices of intention to apply to Parliament for bills, to enable public companies to make various railways, amongst which are the following:—The Mitcham and South-Western; the Sheffield and Lincolnshire; the Croydon and Epsom; the London and York; the Blackburn and Preston; the Glasgow, Dumfries, and Carlisle; the Lancashire, Cheshire, and Staffordshire; the Windsor, Slough and Staines—*atmospheric*; the London, Hounslow, and Western; Chesham and

Bury Junctions with the Bristol and Exeter; the Gravesend and Rochester, widening the same; Tenby, Saundersfoot, and South Wales Junctions with the Brighton and Chichester; junction with the London and Brighton, near the Croydon station; Eastern Counties Junction and Southampton Junctions with the Midland, Boston, Grantham, Leicester, and Midland Counties Junction; Nottingham and Gainsborough; junction with the Chester and Mersey; junction with the Grand Junction; Norfolk Railway extension; and junctions with the Brighton, Lewes, and Hastings. The Great Eastern and Western Company have entered into an alliance with the Great Western, on terms highly advantageous and honourable to both parties, and of great strict faith as regards their previous engagements. Reports having been circulated, to the effect that the plans, sections, books of reference, &c., of the projected Lancashire and North Yorkshire scheme will not be ready for the forthcoming session of Parliament, such reports, it appears, are without foundation, as everything will be ready in due time, in compliance with the Standing Orders of Parliament; that satisfactory arrangements have been concluded with the landowners on the line, combined with existing agreements between this company and the Manchester and Leeds Railway Company, who have entered into terms of amity with Mr. Hudson, and other large companies, which place the Lancashire and North Yorkshire Railway in the most favourable position. Considerable opposition has been made to railway surveying by the Duke of Leeds, Mr. Wyvill, and some other gentlemen, for some of the projected lines which pass the vicinity of Bedale. His Grace has published a hand-bill, calling upon his neighbours to support him against these intruding surveyors; Mr. Wyvill has also prohibited them from entering his estate. They have, however, been attempting to enter *malgré lui*, but a strong force is kept upon the line night and day, and it is said that preparations are making to arrest them as the last extremity. This is nearly as bad as the Pope of Rome. The directors of the Nottingham and Gainsborough Railway Company, and also on the part of the London, Warwick, Leamington, and Kidderminster Railway Company, have made a public statement of the present state of their concerns, so as to prove they fear not an investigation into the management of their affairs. This is acting with candour and honesty.

The following meetings have been held during the week:—A very large meeting of the shareholders of the Durham and Sunderland Railway was held in the Commission Room, Exchange-buildings, Sunderland, on Monday last, to consider the propriety of disposing of the line, with all its branches, property, and effects to the Newcastle and Darlington Junction Railway; after a few observations, detailing the new arrangements intended to be entered into, the motion was carried unanimously. A special meeting of the proprietors of the London and Brighton Railway was held on Thursday last at the London-bridge station, to consider the expediency of amalgamating with the London and Croydon, and to authorise the directors to raise by mortgage or bond such sums as they are authorised to raise under the Brighton and Chichester, and Brighton and Lewes Acts of Incorporation. The Hon. Capt. Hotham, chairman of the Brighton and Chichester, supported the amalgamation, and remarked that the opposition of the Croydon last session had prevented the Brighton Company obtaining a West-end terminus, the importance of which was self evident. The chairman (Rowland Hill, Esq.) stated that the directors expected that the Brighton and Chichester line would be ready for opening before the end of this year; and the Brighton, Lewes, and Hastings, by next spring. The motion was carried without a dissent. A very numerous meeting of the proprietors of the London and Croydon Railway was also held at the same terminus, for the purpose of taking into consideration the proposals of the above company, for amalgamating the London and Brighton and the London and Croydon Railways. On the question being put, the meeting expressed their unanimous approbation of the terms of the amalgamation. The chairman next laid before the meeting a proposition for forming a steam-packet company, in connection with the Brighton Company, in order to compete for the traffic coming from the opposite coast of France. He also congratulated the company upon the fact that the Croydon Company was the first to establish the atmospheric principle, and he had not the least doubt upon his mind, but that, in a few years, the atmospheric railway system would effect as great a revolution in railways, as steam had done in the former modes of travelling. The atmospheric principle would be found to be cheaper, better, and more rapid. Thanks were voted to the chairman and directors for their services. A meeting of the proprietors of the South-Western Railway was held on Thursday, at the London Tavern (at which only half a dozen were present), to address the directors upon, and to oppose the attempt made by the Great Western, to provide settlements with the landowners along the line, which had been very easily by him and partners from Messrs. Cooke, and they to take into consideration the present position of the affairs of the South-Western. After some discussion, the meeting separated without coming to any decision. On Thursday evening a public meeting of the owners of property, and other persons interested in the Regent's Canal, and opposed to its conversion into a railway, was held at the Angel, Islington, for the purpose of receiving the report of a committee appointed on the 8th of October last. The secretary having read a voluminous report, giving a history of the canal, and the cost of its construction, and the powers vested in its proprietors, which was received and adopted, it was then agreed, that the meeting deem it highly necessary to continue to watch the proceedings of the Regent's Canal Company, and oppose that or any other project for stopping up the canal. A meeting of the inhabitants of Weymouth was convened on Monday last, at the Guildhall, for the purpose of considering that line. The discussion was a protracted one, and the meeting was adjourned for a fortnight. An extraordinary general meeting of the shareholders of the Caledonian Company was held on Wednesday last, at the Royal Hotel, Edinburgh, J. J. Hope-Johnstone, Esq., M.P., in the chair, for the purpose of having a report presented, detailing the new arrangements that the directors contemplate entering into, and the necessity to make preparations for bringing before Parliament, in the ensuing session, such additional works, or projects as the company may think expedient. The hon. chairman stated, that, from the nature of the country in which some of the heaviest works of the Caledonian occur, considerable time had necessarily been required, in order to provide accommodation for the workmen, but for some weeks past 2500 men have been employed, and at an early period a large addition will be made to this number. The directors have also been much engaged in effecting settlements with the landowners along the line, all of which had been very easily by him and partners from Messrs. 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## RAILWAY SHARE LIST.

RAILWAYS.	Paid.	Price.	Fluctuation during week.
Aberdeen	25	8	8 9
Amesbury, Colchester, and Farnham	100	124	124 7
Birmingham and Gloucester—200 shares	100	30	30 32
Birmingham and Oxford Junction—200 shares	2	3 1/2	3 1/2 4 1/2
Brighton, Lewes, and Hastings—200 shares	20	2	2
Bristol and Exeter—100 shares	70	67	67 91
Ditto New—250 shares	2	8 1/2	8 1/2 10
Bristol and Gloucester—500 shares	30	56	56 55
Colchester—500 shares	5	9 1/2	9 1/2 12 1/2
Ditto Extension—500 shares	2	8 1/2	8 1/2 2 1/2
Cambridge and Lincoln—250 shares	1 1/2	3	3 5 1/2
Ditto New—250 shares	1 1/2	3	3 2 1/2
Canterbury and Dover	1	1 1/2	1 1/2 1 1/2
Cheltenham and Oxford	2	3 1/2	3 1/2 3 1/2
Cheltenham and Holyhead—500 shares	15	17	17 17 1/2
Cheltenham and Brighton	20	21	21 21 30
Clydesdale Junction	2	2 1/2	2 1/2 30
Cork and Killybegs—500 shares	2 1/2	2 1/2	2 1/2 30
Cork and Waterford—250 shares	1 1/2	1 1/2	1 1/2 30
Coventry, Nuneaton, Birmingham, and Leicester—250 sh.	1 1/2	1 1/2	1 1/2 30
Ditto Extension—500 shares	2 1/2	2 1/2	2 1/2 30
Direct North—500 shares	2 1/2	2 1/2	2 1/2 30
Ditto North—500 shares	2 1/2	2 1/2	2 1/2 30
Ditto Manchester (Hemphill)—500 shares	2 1/2	2 1/2	2 1/2 30
Dublin and Belfast Junction—500 shares	2 1/2	2 1/2	2 1/2 30
Dublin, Belfast, and Coleraine—500 shares	2 1/2	2 1/2	2 1/2 30
Dublin and Galway—500 shares	2 1/2	2 1/2	2 1/2 30
Dundalk and Enniskillen—500 shares	2 1/2	2 1/2	2 1/2 30
Eastern Counties—250 shares	14 1/2	10 1/2	10 1/2 11 1/2
Ditto New—250 shares	14 1/2	11 1/2	11 1/2 11 1/2
Ditto Farnham—No. 1, 61 1/2 shares	14 1/2	11 1/2	11 1/2 11 1/2
Ditto Dittie—No. 2, 61 1/2 shares	14 1/2	11 1/2	11 1/2 11 1/2
East Dereham and Norwich	1	1	1
Eastern Union—500 shares	20	20	20
Ditto Extension—250 shares	1	1	1
East Lincolnshire	1	1	1
Edinburgh and Glasgow—500 shares	50	74	74 74 1/2
Ditto 1/2 shares—125 shares	12 1/2	10 1/2	10 1/2 10 1/2
Ditto New 1/2 shares—125 shares	12 1/2	10 1/2	10 1/2 10 1/2
Edinburgh and Perth	1 1/2	4 1/2	4 1/2 4 1/2
Ely and Bedford—250 shares	1 1/2	4 1/2	4 1/2 4 1/2
Exeter, Yeovil, and Dorchester—500 shares	2 1/2	2 1/2	2 1/2 2 1/2
Gloucester, Abergavenny, and Central Wales—250 shares	1 1/2	2 1/2	2 1/2 2 1/2
Glebe and Doncaster—250 shares	4 1/2	4 1/2	4 1/2 4 1/2
Grand Junction—100 shares	100	28 1/2	28 1/2 29 1/2
Ditto 1/2 shares—50 shares	25	47 1/2	47 1/2 47 1/2
Ditto 1/2 shares—250 shares	25	47 1/2	47 1/2 47 1/2
Grand Union (Nottingham and Lynn)	1 1/2	1 1/2	1 1/2 1 1/2
Great Grimsby and Sheffield—500 shares	5	17 1/2	17 1/2 17 1/2
Great Northern and Western (Ireland)—500 shares	15	20	20 23 1/2
Ditto Extension—500 shares	7 1/2	19 1/2	19 1/2 19 1/2
Great Northern	100	214 1/2	214 1/2 214 1/2
Ditto New—400 shares	5	40 1/2	40 1/2 40 1/2
Ditto New—300 shares	2	36 1/2	36 1/2 36 1/2
Great North of Scotland	2 1/2	4 1/2	4 1/2 4 1/2
Great Western—1000 shares	80	144	144 144 1/2
Ditto 1/2 shares—500 shares	50	84	84 84 1/2
Ditto Fifths—200 shares	20	33 1/2	33 1/2 33 1/2
Harwich—200 shares	2	1 1/2	1 1/2 1 1/2
Hull and Selby—500 shares	50	103 1/2	103 1/2 103 1/2
Ditto 1/2 shares—125 shares	12 1/2	20 1/2	20 1/2 20 1/2
Ditto 1/2 shares—250 shares	2	22 1/2	22 1/2 22 1/2
Inverness and Elgin—200 shares	1	1	1 1 1/2
Kendal and Windermere—250 shares	1 1/2	1 1/2	1 1/2 1 1/2
Leicester and Carlisle—200 shares	25	54	54 54 1/2
Leicester and Bradford—500 shares	15	60	60 60 1/2
Leicester and West Riding Junction	1 1/2	1 1/2	1 1/2 1 1/2
Leicester and Birmingham—200 shares	2 1/2	1 1/2	1 1/2 1 1/2
Leicester and Bedford—200 shares	2 1/2	1 1/2	1 1/2 1 1/2
Leicester and Tamworth—200 shares	2 1/2	1 1/2	1 1/2 1 1/2
Lincoln and Waterford—500 shares	2 1/2	2 1/2	2 1/2 2 1/2
Liverpool and Manchester—1000 shares	100	230	230 230 1/2
Ditto 1/2 shares—500 shares	50	39 1/2	39 1/2 39 1/2
Liverpool and Leeds Direct—500 shares	2 1/2	2 1/2	2 1/2 2 1/2
Liverpool, Manchester, and Newcastle Junction	1 1/2	4 1/2	4 1/2 4 1/2
London and Birmingham—1000 shares	213	222 1/2	222 1/2 222 1/2
Ditto Thirds—300 shares	10	41 1/2	41 1/2 41 1/2
Ditto 1/2 shares—250 shares	2 1/2	2 1/2	2 1/2 2 1/2
London and Birmingham Extension—250 shares	1 1/2	1 1/2	1 1/2 1 1/2
London and Blackwall—500 shares	1 1/2	1 1/2	1 1/2 1 1/2
Ditto New	1 1/2	1 1/2	1 1/2 1 1/2
London and Brighton—500 shares	50	58 1/2	58 1/2 58 1/2
Ditto Consolidated Eighties—500 shares	35	40	40 40 1/2
Ditto Sixties	1	1	1 1
London and Croydon	20	29 1/2	29 1/2 29 1/2
Ditto New	13 1/2	13 1/2	13 1/2 13 1/2
Ditto Guaranteed 5 per cent.—50 shares	5	7 1/2	7 1/2 7 1/2
London and Greenwich	1 1/2	1 1/2	1 1/2 1 1/2
Preference or Privilege	2 1/2	2 1/2	2 1/2 2 1/2
London and South Western	1 1/2	1 1/2	1 1/2 1 1/2
Ditto Consolidated Eighties—400 shares	20	35 1/2	35 1/2 35 1/2
Ditto New—500 shares	2 1/2	11 1/2	11 1/2 11 1/2
Ditto New—400 shares	2 1/2	11 1/2	11 1/2 11 1/2
London and York—500 shares	2 1/2	2 1/2	2 1/2 2 1/2
London and Windsor—250 shares	1 1/2	1 1/2	1 1/2 1 1/2
London, Warwick, and Kidderley—500 shares	2 1/2	2 1/2	2 1/2 2 1/2
London, Salisbury, and Yeovil—500 shares	2 1/2	2 1/2	2 1/2 2 1/2
Londonderry and Coleraine—500 shares	2 1/2	2 1/2	2 1/2 2 1/2
Londonderry and Kilmacshannon—500 shares	2 1/2	2 1/2	2 1/2 2 1/2
Lynn and Ely—250 shares	5	8 1/2	8 1/2 8 1/2
Lynn and Dereham—250 shares	5	8 1/2	8 1/2 8 1/2
Manchester and Leeds—500 shares	76	146	146 146 1/2
Ditto 1/2 shares—250 shares	34	22 1/2	22 1/2 22 1/2
Ditto 1/2 shares—100 shares	2	22 1/2	22 1/2 22 1/2
Ditto Sixties—250 shares	10 1/2	10 1/2	10 1/2 10 1/2
Manchester and Birmingham—400 shares	40	78 1/2	78 1/2 78 1/2
Ditto 1/2 shares—100 shares	4	15 1/2	15 1/2 15 1/2
Ditto New 1/2 shares—100 shares	2	10 1/2	10 1/2 10 1/2
Ditto Continuation and Welsh Junction	1 1/2	1 1/2	1 1/2 1 1/2
Manchester, Buxton, and Matlock—200 shares	2 1/2	2 1/2	2 1/2 2 1/2
Midland	138	156 1/2	156 1/2 156 1/2
Ditto Fifths—200 shares	20	27 1/2	27 1/2 27 1/2
Ditto New—400 shares	20	117 1/2	117 1/2 117 1/2
Midland Great Western (Irish)—500 shares	2 1/2	2 1/2	2 1/2 2 1/2
Ditto Extension to Sligo	2 1/2	2 1/2	2 1/2 2 1/2
Newcastle and Berwick—200 shares	5	14 1/2	14 1/2 14 1/2
Newcastle and Carlisle—1000 shares	100	113 1/2	113 1/2 113 1/2
Newcastle, Durham, and Lancashire Junction	20	67 1/2	67 1/2 67 1/2
Newcastle and Darlington Junction—250 shares	25	47 1/2	47 1/2 47 1/2
Ditto New (Branding)—250 shares	15	22 1/2	22 1/2 22 1/2
Newport and Abergavenny	2 1/2	2 1/2	2 1/2 2 1/2
Newry and Enniskillen—500 shares	2 1/2	2 1/2	2 1/2 2 1/2
Newark, Sheffield, and Boston—250 shares	2 1/2	2 1/2	2 1/2 2 1/2
North British—250 shares	15	22 1/2	22 1/2 22 1/2
Ditto New	1 1/2	1 1/2	1 1/2 1 1/2
North Devon	1 1/2	1 1/2	1 1/2 1 1/2
Northern and Eastern—500 shares	45	61 1/2	61 1/2 61 1/2
Ditto Scrip, issued at 50 dis.—500 shares	35	59 1/2	59 1/2 59 1/2
Ditto 1/2 shares—120 shares	12 1/2	19 1/2	19 1/2 19 1/2
Ditto New	1 1/2	1 1/2	1 1/2 1 1/2
North Kent and Direct Dover—500 shares	2 1/2	2 1/2	2 1/2 2 1/2
North Staffordshire—200 shares	42 1/2	42 1/2	42 1/2 42 1/2
North Wales—250 shares	3 1/2	3 1/2	3 1/2 3 1/2
North Wales and Brecknock—500 shares	14	24 1/2	24 1/2 24 1/2
Ditto New—100 shares	1 1/2	1 1/2	1 1/2 1 1/2
Northampton, Banbury, and Cheltenham	2 1/2	2 1/2	2 1/2 2 1/2
Nottingham and Boston—250 shares	1 1/2	1 1/2	1 1/2 1 1/2
Nottingham, Erewash Valley, and Manchester	1 1/2	1 1/2	1 1/2 1 1/2
Oxford, Witney, and Cheltenham	1 1/2	1 1/2	1 1/2 1 1/2
Porth and Faversham	2 1/2	2 1/2	2 1/2 2 1/2
Portsmouth Direct	2 1/2	2 1/2	2 1/2 2 1/2
Preston and Wyre—500 shares	20	41 1/2	41 1/2 41 1/2
Ditto 1/2 shares	2 1/2	10 1/2	10 1/2 10 1/2
Richmond—200 shares	5	10 1/2	10 1/2 10 1/2
Rugby and Huntingdon—200 shares	1 1/2	1 1/2	1 1/2 1 1/2
Rugby, Warwick, and Worcester—200 shares	42 1/2	42 1/2	42 1/2 42 1/2
Scottish Central—250 shares	15 1/2	17 1/2	17 1/2 17 1/2
Scottish Midland—250 shares	1 1/2	1 1/2	1 1/2 1 1/2
Sheffield and Lincoln—250 shares	1 1/2	1 1/2	1 1/2 1 1/2
Sheffield and Manchester—1000 shares	100	138 1/2	138 1/2 138 1/2
Ditto 1/2 shares—250 shares	8 1/2	16 1/2	16 1/2 16 1/2
Shrewsbury, Wolverhampton, Dudley, & Birm.—500 shares	2 1/2	2 1/2	2 1/2 2 1/2
Shrewsbury and Trent Valley Union—200 shares	2 1/2	1 1/2	1 1/2 1 1/2
Shrewsbury, Hereford, and North Wales	2 1/2	2 1/2	2 1/2 2 1/2
Somersetshire Midland	20	28 1/2	28 1/2 28 1/2
South Devon—500 shares	2 1/2	2 1/2	2 1/2 2 1/2
Sligo and Shannon	1 1/2	1 1/2	1 1/2 1 1/2
South Eastern and Dover	35	38 1/2	38 1/2 38 1/2
Ditto New, issued at 32 1/2—No. 1, 500 shares	12 1/2	11 1/2	11 1/2 11 1/2
Ditto New, ditto at 32 1/2—No. 2, 500 shares	7 1/2	11 1/2	11 1/2 11 1/2
Ditto New, ditto at 30 1/2—No. 3, 500 shares	2 1/2	4 1/2	4 1/2 4 1/2
South Midland—500 shares	2 1/2	4 1/2	4 1/2 4 1/2
South Wales—500 shares	2 1/2	4 1/2	4 1/2 4 1/2
Staines and Richmond—200 shares	1 1/2	1 1/2	1 1/2 1 1/2
Trent Valley—200 shares	1 1/2	1 1/2	1 1/2 1 1/2
Trent Valley and Holyhead Junction—200 shares	1 1/2	1 1/2	1 1/2 1 1/2
Warwick and Kilmarnock—200 shares	1 1/2	1 1/2	1 1/2 1 1/2
Waterford and Kilkenny—200 shares	1 1/2	1 1/2	1 1/2 1 1/2
Waterford, Wexford, and Valence	1 1/2	1 1/2	1 1/2 1 1/2
Waterford, Wexford, Wicklow, and Dublin	1 1/2	1 1/2	1 1/2 1 1/2
West Cornwall—200 shares	1 1/2	1 1/2	1 1/2 1 1/2

## RAILWAYS—continued.

RAILWAYS—continued.			Fluctuation during week.
Ditto Eastern and Southern Counties—500 shares	21 1/2	—	—
Ditto London, old shares—250 shares	29	—	—
Ditto London, new shares—250 shares	29	3	3 1/2
Ditto London and North—500 shares	29	11	11 10/16
Ditto West of England—500 shares	29	2	2 1/2
Ditto West of England and Carlisle—500 shares	29	3 1/2	3 1/2
Ditto West of England, East, and Weymouth—500 shares	29	5	6 1/2
Ditto Worcester, Hereford, and Gloucester—500 shares	29	1	1 1/2
Ditto Worcester, Hereford, and Gloucester Union	29	1	2 1/2
Ditto Weymouth and Dorset—500 shares	29	20	20 1/2
Ditto Weymouth and Dorset—500 shares	29	20	20 1/2
Ditto New—250 shares	14	21	21 30
Ditto York and Carlisle—250 shares	29	24	24 31
Ditto York and North Midland—500 shares	29	106	110 65
Ditto York and North Midland—500 shares	29	65	65 55
Ditto York and North Midland—500 shares	29	65	65 55
Ditto Scarborough Branch—250 shares	25	64	—
Ditto Selby—500 shares	20	78	78 77
Ditto Selby—500 shares	20	78	78 77
Ditto Extension—250 shares	29	96	99 29 1/2



**CAMBRIAN COMPANY—FOR IRON, FIRE-BRICK, AND POTTERY WORKS.**  
**BOULOGNE-SUR-MER, FRANCE.**  
*Society "à commandite"—Shareholders responsible only to the amount of their respective shares.*  
 A minimum dividend of 6 per cent. per annum is guaranteed.  
 Capital £100,000, in 5000 shares, of £20.—Deposit £1 per share.  
 Dividend half-yearly—minimum 6 per cent. per annum guaranteed.  
 Manager in Chief—Roger Hopkins, Esq. Member of the Institut. Civil Engineers, &c.  
 Consulting Engineer—David Mather, Esq. F.R.S.  
 Consulting Counsel for France—Monsieur Carmier, Boulogne.  
 Solicitor—W. C. Gladstone, Esq. 21, Cloak-lane, London.  
 English Secretary—Rev. J. Turnbull, B.A. Boulogne.  
 French Secretary—Monsieur Veil, Boulogne.  
 Actuaries—John Simpson, Esq., office of the company, Boulogne.  
 Bankers—Messrs. Achille Adam, Boulogne; Messrs. Lélou, Paris.  
 To whom deposits must be paid, or in England to Messrs. Comita and Co., Strand, for account of Roger Hopkins and Co. Boulogne.  
 Applications for remaining shares, in the usual form, to be addressed to John Simpson, Esq., secretary to the company, at their office, No. 2, Rue-du-Pont-de-Service, Boulogne; or at the office of W. C. Gladstone, Esq., 21, Cloak-lane, Chancery; or at Mr. John Stride, 7, Tottenham-yard, Lothbury, where the prospectus and statutes of the company may be obtained.—Boulogne-sur-Mer, Oct. 1, 1845.

### PATENT GALVANISED IRON COMPANY,

3, Mansion House-place, October 28, 1845.  
 At the Special General Meeting of the shareholders of this company, held this day, pursuant to advertisement, the following resolutions were adopted:—  
 Resolved,—That this meeting approve of the plan for raising the new capital suggested in the circular (dated October 7th).  
 Resolved,—That 25,000 shares, of £10 each, be created, on which a deposit of £1 per share shall be payable on allotment—£1 per share on February 1st—£1 per share on June 1st—and £1 on September 1st, 1846; but that no further call shall be made without the sanction of a special meeting, convened for the purpose of considering its propriety.  
 Resolved,—That the 25,000 shares so created be allotted, at the discretion of the directors, to such parties as shall apply for the same on or before the 10th of November next; but that every shareholder shall have a right to subscribe for one share in respect of every share he now holds in the company.  
 Resolved,—That the best thanks of the meeting be given to the chairman and directors, for the great care with which they have always consulted the best interests of the shareholders.  
 S. VINCENT, Secretary.

### THE PATENT GALVANISED IRON COMPANY

call PUBLIC ATTENTION to the following, amongst other GREAT WORKS executed with their patent article:—  
 THE ROOFS OF THE NEW HOUSES OF PARLIAMENT, at Westminster.  
 THE SLIPS, or SHEDS, for building "first-rate," in the ROYAL DOCKYARDS, at Woolwich, Portsmouth, Deptford, &c. (the latter visible in passing down the Thames, and is an object of great beauty, having a centre span of eighty-two feet). The Timber Sheds, and other buildings, in the Royal Dockyards, are also being roofed and constructed with this fire-proof material.  
 THE BUOYS and other MARINE WORKS of the Honourable Corporation of the Trinity House have for two years been CONSTRUCTED with the Galvanised Iron, which resists effectually the action of sea water.  
 The celebrated ELECTRIC LIGHTS of Messrs. Cooke and Wheatstone are CONSTRUCTED exclusively with the company's Galvanised Wires, &c.  
 And this indestructible iron, under all common influences—viz., sea water, saline or damp atmospheres, is admirably adapted for  
 ROOFING in all climates, being Fire, Hurricane, and Lightning proof, if a continuous communication be formed with the earth by Galvanised Iron Spouting attached to the roof.  
 DOCK-WORK, such as wire rope bridges, wire fences, fire proof buildings, corrugated doors, shutters, greenhouses, conservatories, and an endless variety of purposes.  
 Roofs of gas works and chemical manufactories.  
 Ship-building purposes—viz., blocks, bolts in lieu of copper, and knees.  
 For chain rigging, wire rigging, and sheathing, it is extensively used, and the following  
 CERTIFICATE, amongst many others, is affixed:—  
 Lloyd's Register, London, February 7, 1845.  
 2, White Lion-court, Cornhill.

The undersigned surveyors to this society did, at the request of Messrs. Mallin and Rawlinsons, examine the Patent Galvanised Iron Sheathing upon the bottom of the brig *Mary Stewart*, lying in Messrs. Curling, Young, and Co.'s dry dock, Limehouse, and lately returned from a voyage to the island of Ichnoe, on the coast of Africa, and found it unbroken and perfect throughout the vessel's bottom, and no appearance of corrosion or oxide of iron upon its surface. The iron that had been exposed by puncturing the nail holes had become coated with zinc—the sheathing was nearly clean, and free from marine grass and animalcules. It appears to have answered very well during the before-mentioned voyage, and the ship had sailed without it being found necessary to do any repairs to it.  
 PETER COURTNEY,  
 J. H. RITCHIE,  
 JAMES MARTIN, } Lloyd's Surveyors.

The company are prepared to supply all articles required, or execute work of every description.  
 Works.—London, at Millwall, Poplar, near West India Docks; Staffordshire, Phoenix and Lea Brook Iron-Works—from which corrugated iron and every description of iron, galvanised or otherwise, can be supplied; also, from the South Wales Works, near Bridgend, Glamorganshire.  
 Office—3, Mansion-house-place, London.

**CAUTION AND NOTICE.**  
 This GREAT PATENT, like every good one, is invaded, and, by the law's delays (and its miserable state as regards the interests of patentees), the parties are able to evade the consequences some short time longer. The same thing has occurred with other patents. In Nelson's Hot-Blast Patent the invasion went on for years; but one firm only had at last to pay upwards of (£150,000) ONE HUNDRED AND TWENTY THOUSAND POUNDS REDEMPTION. BUYERS as well as SELLERS are LIABLE, and the PATENTEES will PROCEED AGAINST ALL PARTIES who INVADE this one of the most IMPORTANT INVENTIONS ever brought into use.  
 Actions are proceeding against Messrs. Morewood and Rogers, Messrs. Walker (Gospel Oak), and many others.  
 The company take this opportunity of giving the most unequivocal contradiction to the advertisement issued by Messrs. Morewood and Rogers on 8th August.

### PATENT GALVANISED TINNED IRON.

MOREWOOD AND ROGERS' PATENT.  
 The PATENTEES beg to call the attention of the PUBLIC to the ABOVE METAL, which is being USED extensively by the LORDS COMMISSIONERS of the ADMIRALTY, the BOARD OF ORDNANCE, and OTHER PUBLIC BODIES.  
**FOR ROOFING AND OTHER PURPOSES.**  
 The large WAREHOUSES and SHEDS in the LIVERPOOL DOCKS have had the ZINC with which they were formerly covered STRIPPED OFF, for the purpose of being COVERED WITH IT; and the NEW DOCK WAREHOUSES of that city are likewise being COVERED WITH THIS METAL.  
 It is peculiarly ADAPTED for RAILWAY STATIONS, as forming a light, strong, and incorrodible covering.  
 This PROCESS is the ONLY ONE by which the QUALITY of the IRON is PRESERVED, instead of being injured; and it is, therefore, very malleable, and it may be worked up with the greatest ease into articles of all descriptions.  
 Further information may be obtained on application at the WAREHOUSE  
 No. 9, STEEL-YARD UPPER THAMES-STREET

### THE PATENT GALVANISED IRON COMPANY.

—CAUTION.—The public are cautioned against giving credit to the mis-statements put forth by the Galvanised Iron Company in their advertisement.  
 The ONLY ACTION proceeding in regard to this Patent is one, NOT AGAINST MOREWOOD AND ROGERS, OR ANY OTHER PARTY CONNECTED WITH THEM, BUT A WRIT OF *SCIRE FACIAS* AGAINST THE COMPANY'S PATENT FOR ITS CANCELLATION.  
 Nothing can be more unfortunate than the comparison between this Patent and that of Nelson's which was held by the jury to be valid, whereas THAT OF THE GALVANISED IRON COMPANY WAS, AFTER THREE DAYS' TRIAL, FOUND, UPON THEIR OWN EVIDENCE, TO BE INVALID.  
 They assert that their Patent is being invaded—this we entirely deny; and to show the folly of the charge, the working of it was found by the jury to be impracticable. No one—not even they themselves—ever have, or ever will be able to work it.  
 In working as they now do, they have ADOPTED PART OF OUR PROCESS, as specified in our patent, WITHOUT OUR LEAVE OR LICENSE.  
 With regard to delay, it has been entirely on their part, as the records of the courts will prove. They have availed themselves of every opportunity to hinder and delay the *scire facias*, now proceeding, by applications for time, &c.; and, finally, by putting in a plea, which their solicitor never believed to be necessary for the defence of their patent from cancellation, but which the Lord Chancellor, on Monday last, refused to admit, and dismissed their appeal with costs.  
 MOREWOOD AND ROGERS,  
 Patentees of Galvanised Tinned Iron.  
 Warehouse, 9, Steel-yard, Upper Thames-street.  
 August 29, 1845.

### PATENT GALVANISED IRON COMPANY.—NOTICE.

—This patent was decided by the jury, in *Patterson v. Holland*, tried in the Common Pleas in February last, to be invalid, and their verdict has not been set aside. The delay in actually cancelling the patent by the *scire facias* issued for that purpose, is solely attributable to the patentees resorting to frivolous and dilatory measures for postponing proceedings—this showing that they well knew how such proceedings must terminate.

### LAZERT ON DEBILITY, NERVOUSNESS, AND ALL DISORDERS ARISING FROM EXCESS, &c.

"He who in pleasure's downy arms  
 Her lost his health, or youthful charms,  
 Exclaim, 'In me behold a man!'"  
 Just published, the Seventh Edition, in a sealed envelope, price 2s. 6d.; or free by post to any address, 1s. 6d.

### SELF-PRESERVATION: A Popular Essay on those concealed

disorders of the generative system, originating in solitary habits, youthful excess, or infection, and terminating in local and constitutional weakness, nervous debility, melancholy, incapacity, gonorreia, syphilis, indigestion, insanity, consumption, &c., with plain directions for their treatment and cure. Illustrated with engravings, by SAMUEL LAZERT, consulting surgeon, 9, Bedford-street, Bedford-square, London; Honorary Member of the London Hospital Medical Society, Licentiate of Apothecaries Hall, London, &c.

"The various positions of lover, husband, and parent, are the inherent privileges of mankind, and, but for the accidents of mortality, would be awarded equally to all. To such, among others, this essay addresses itself; and, by its personal, many questions may be satisfactorily adjusted that admit of no appeal, even to the most confidential friend."  
 —*August Garret.*

Sold wholesale by S. Gilbert, 51 and 52, Paternoster-row; retail by Starke, 23, Tichborne-street, Quadrant; Hannay and Co., 63, Oxford-street; and Gordon, 146, Leadenhall-street. At home daily, from nine to three, and from five till eight, and immediate replies sent to all letters, if accompanied by the consultation fee of 2s. 6d. for advice, &c.

9, Bedford-street, Bedford-square, London.

### STANDARD, NOTTINGHAM, AND LONDON DIRECT RAILWAY COMPANY.

The committee of management have great satisfaction in announcing to those parties who have applied for shares in this undertaking, that the necessary arrangements have been made, on which they place their reliance, that the survey of the line will be completed and the plans deposited in the comply with the Parliamentary Standing Orders, when the letters of allotment are issued.  
 By order of the committee,  
 1, Moorgate, Nov. 5, 1845. H. F. ALSTON, Secretary.

### CALAIS, DUNKIRK, & BRUGES JUNCTION RAILWAY.

37, Moorgate-street, 21st October, 1845.—The deposits not being required to be made until shortly before the meeting of the Chambers in France and Belgium, the committee of management have directed the ALLOTMENT OF SHARES to be DEFERRED for the present. Due notice will be given when it will take place.  
 By order,  
 P. N. SCANLAN, Secretary.

### LONDON, WORCESTER, AND SOUTH STAFFORDSHIRE RAILWAY.

Any person having any CLAIM on the London, Worcester, and South Staffordshire Railway Company (commonly called the RUGBY, or TRING, RAILWAY), are desired to SEND in the same to this OFFICE, on or before MONDAY NEXT, the 10th inst., after which time no further claim will be received, and the committee will proceed to apportion the balance of the deposits among the scripholders.  
 By order of the provisional committee,  
 Office, 28, Waterloo-street, Birmingham. HENRY MORGAN, Secretary.

### TEAN AND DOVE VALLEY RAILWAY.

TO THE EDITOR OF THE MINING JOURNAL.  
 Observing that doubts have been expressed whether, in many of the various railway schemes now before the public, the deposits on the capital have been paid, or, if paid, have been properly applied, the committee think it right to state, that the DEPOSITS on the shares allotted in this railway have been duly PAID, and that a sum, exceeding three-fourths of the amount, has been invested in Consols in the names of trustees, for the comfort of the shareholders.  
 By order of the provisional committee,  
 Office of the Company, Burton-on-Trent, Oct. 31, 1845. J. B. HULLER, Deputy-Chairman.

### OXFORD, THAME, HIGH WYCOMBE, AND UXBRIDGE JUNCTION RAILWAY.

The committee of management have great gratification in being enabled to state to applicants for shares that they have received a most satisfactory report from their engineer, with an assurance that he will have everything in his department ready for Parliament; that they continue to receive assurances of great and general local support; and that after the Standing Orders of the House are complied with, they will proceed with the allotment of shares.  
 HUBERT DE BURGH, Chairman.  
 R. MORTON COLEY, Secretary.

### TOTNES, BUCKFASTLEIGH, AND ASHBURTON RAILWAY.—(PROVISIONALLY REGISTERED.)

COMMITTEE OF MANAGEMENT.  
 THOMAS MICHELMOORE, Esq., Chairman.  
 CHARLES WEBBER, Esq., Vice-Chairman.  
 Charles Michelmore, Esq., William Browne, Esq.,  
 John Reed Fogwill, merchant, Christopher Robins, Esq.,  
 Stephen Francis Sharp, Esq., John Barns, merchant.  
 (With power to add to their number.)

The committee of management beg to announce, that the LETTERS of ALLOTMENT for SHARES in this undertaking have been POSTED; they also beg to state, that, in consequence of the great number of applications which have been received, they have been compelled to pass over those of many highly respectable persons, who are requested to accept this announcement as an answer to their applications.  
 Dated Totnes, Nov. 7, 1845. EDWARDS and BRYETT, solicitors.

### DIRECT LONDON AND MANCHESTER, AND THE DIRECT LONDON AND MANCHESTER INDEPENDENT RAILWAY COMPANIES.

At a meeting of the joint-board of provisional directors of these companies, held at the offices of the Direct London and Manchester Railway Company, this day, it was resolved that the following report of the joint-engineers be advertised:—  
 To the Chairman and Directors of the Direct London and Manchester Railway Company, London, October 30, 1845.  
 The Report of the Engineers engaged in the Survey of a Direct Line of Railway from London to Manchester.

A meeting of all the engineers, and several of their surveyors, was held this morning, and having made a thorough investigation of the state of the plans and sections, we have great pleasure in reporting to the chairman and directors that every thing is proceeding in the most satisfactory manner, and that we have no doubt whatever that all the plans and sections will be ready in ample time for depositing with the Clerks of the Peace and the railway department of the Board of Trade, according to the requirements of the Standing Orders of the House of Parliament.  
 (Signed) JOHN H. RASTRICK, GEO. REMINGTON,  
 JOHN DILLON, Chairman of the Joint-Board.  
 SIDNEY M. HAWKES, Secretary to the Direct London and Manchester Railway Company.  
 HENRY W. MATTHEWS, Secretary to the Direct London and Manchester Independent Railway Company.

### EAST INDIAN RAILWAY COMPANY.

(PROVISIONALLY REGISTERED.)  
 BOARD OF DIRECTORS.  
 CHAIRMAN—Sir GEORGE LARPERT, Bart. (Messrs. Cockerell and Co.)  
 DEPUTY-CHAIRMAN—BAZETT D. COLVIN, Esq. (Messrs. Crawford, Colvin, and Co.)  
 R. Gurney Barclay, Esq. (Messrs. Barclay Brothers and Co.)  
 Joseph Baxendale, Esq.  
 Alexander Bantle, Esq. (Messrs. Bantle and Co.)  
 Robert Bird, Esq. late of the Bengal Civil Service.  
 D. Bruce, Esq. (Messrs. Fletcher, Alexander, and Co.)  
 Sir John Campbell, K.C.H. deputy-chairman of the Peninsular and Oriental Steam Navigation Company.  
 John Cattey, Esq. chairman of the London Dock Company.  
 Major-General Canfield, C.B. late of the Hon. East India Company's Service.  
 T. S. Kelsall, Esq. (Messrs. Kelsalls and Co.)  
 John Pausel Larkins, Esq. (formerly of the Bengal Civil Service, and President of the Marine Board).  
 Captain Alexander Nairne, formerly of the Hon. East India Company's Service.  
 Edward Howley Palmer, Esq. (Messrs. Palmer, Mackillop, Dent, and Co.)  
 Thomas Campbell Robertson, Esq. late Governor of the North-Western Provinces of India.  
 William Scott, Esq. late of Madras (Messrs. Scott, Bell, and Co.)  
 John Stewart, Esq. late of Bombay.  
 MANAGING DIRECTOR—R. Macdonald Stephenson, Esq.

R. F. Gower, Esq. (Messrs. Gower, Gowers and Co.)  
 Captain Farquharson, R.N.  
 Sir Isaac Lyon Goldsmid, Bart.  
 BANKERS—Messrs. Glyn, Hallifax, Mills, and Co.  
 SOLICITORS—Messrs. Freshfield.  
 CONSULTING ENGINEER—J. M. Rendel, Esq. F.R.S.  
 SECRETARY—D. L. Road, Esq.  
 OFFICES, BROAD-STREET BUILDINGS.

At a board of directors of this company, held at these offices, the 22d day of October, 1845, it was unanimously resolved:—

1. That the East Indian Railway Company was formed in the spring of this year, after many months of preliminary discussion and communication with official authorities, for the purpose of carrying out the views and objects of the projectors in the introduction of railways into India.  
 2. That the promoters of the undertaking abstained from adopting any measures towards the formation of a company until they had satisfied themselves of the disposition of the Government of India to support the undertaking by pecuniary aid in some shape, on which basis this company was accordingly established; its object being (as stated in the prospectus) to execute the line of railway which should be selected by Government, with the ulterior extensions and developments consequent upon it.  
 3. That in furtherance of these views the managing director of this company proceeded to Calcutta, in the month of July last, accompanied by a staff of surveyors, for the purpose of making the necessary surveys, obtaining the requisite information, and of ascertaining the views of the local government, prior to the final arrangements for commencing operations.

4. That the information obtained in the course of several years of preliminary inquiry inclined the projectors to the belief that, subject to any unforeseen circumstances, the line from Calcutta to the North Western provinces, by Mirzapore, was the most needed by India, and most calculated to yield a profitable return for investment of capital. And it was therefore that line which was advocated in the first communication with the Government, the selection being left to the Government.

5. That, subsequent to the formation of this company, various projects have been announced for the constructing railways in Western India, some of them forming part and parcel of the scheme of the East Indian Railway Company, and to which the surveys and the operations of the committee in Calcutta may possibly at this moment be directed as an important feature in the design of Government.

6. That under these circumstances it appears to this board to be their imperative duty in the interest of this company to adopt such measures as will have the effect of securing to the company the benefit of their original scheme in its full integrity.

7. That with this view, and in order to prove to the Government of India their full merits of carrying out any arrangements which it may be disposed to make with this company for the construction of railways on an extended scale (in the event of its being essential to the scheme of Government so to commence) it is desirable that the capital of this company should be increased to ten millions by the issue of new shares.

8. That 120,000 shares of £50 each, be created, on which a deposit of 1s. will be forthwith payable; that of this number 80,000 shares be distributed ratably among the approved holders of the scrip already issued in the proportion of one new for one old share, and that the remaining shares, subject to the necessary allotment to the new directors, be reserved to be disposed of hereafter as may be found advantageous for the interests of the undertaking.

9. That these resolutions be advertised in the daily newspapers, for the information of the proprietors and the public.  
 GEORGE LARPERT, Chairman.

In conformity with the above arrangement it is requested that all holders of scrip desirous of availing themselves of the above provisions do send in their scrip on or before the 20th November next, accompanied by an application addressed to the secretary in the following form:—  
 To the Provisional Committee of the East Indian Railway Company.  
 Gentlemen,—I hand you herewith scrip (or banker's receipt for deposit on) shares in the East Indian Railway Company, in respect of which I request you to allot me my proportion of the new issue of shares, and I hereby agree to pay the deposit of 1s. per share upon the same, and to sign such deeds as may be required in respect of such new issue.

Date .....  
 Name in full .....  
 Signature .....  
 Profession or occupation .....  
 Residence .....

All holders of scrip in Great Britain failing to lodge their scrip as above requested will be considered as not desirous of accepting any additional allotment, but an extension of time will be allowed to holders of scrip in India.  
 By order of the board,  
 8, Broad-street-buildings, Oct. 24. D. I. NQAD, Sec.

### ELECTRIC TELEGRAPH COMPANY.

COOKE AND WHEATSTONE, PATENTEES.  
 (PROVISIONALLY REGISTERED.)  
 English Patents dated—12th June, 1837;  
 18th April, 1839;  
 21st January, 1840;  
 8th September, 1842;  
 6th May, 1845.

**PRELIMINARY ANNOUNCEMENT.**  
 The Electric Telegraph is already established, or in course of formation, to an extent exceeding 500 miles, upon the following metropolitan and other lines of railway:—  
 METROPOLITAN LINES.  
 SOUTH-EASTERN  
 SOUTH-WESTERN  
 GREAT WESTERN  
 LONDON AND BIRMINGHAM  
 LONDON AND CROYDON  
 LONDON AND BLACKWALL (about to be united by a branch with the Eastern Counties Railway).  
 COUNTRY LINES.  
 LIVERPOOL AND MANCHESTER  
 NORTHAMPTON AND PETERBORO'  
 NORTH MIDLAND  
 SHEFFIELD AND MANCHESTER  
 PRESTON AND WYKE  
 LEEDS AND MANCHESTER  
 EDINBURGH AND GLASGOW.

Arrangements for the formation of this company have been in progress for a month past, in connection with some of the leading railway interests.  
 The object of the company is to establish a complete system of telegraphic communication, connecting the metropolis with the different ports and cities of the kingdom.  
 The railway companies which have already adopted the Electric Telegraph, will be invited to concur in the accomplishment of this national undertaking.  
 The telegraphs already laid down are adapted for the reception of the requisite additional wires without further expense.  
 A detailed prospectus will shortly be issued—in the meantime communications may be addressed to Messrs. Wilson and Harrison, solicitors, 1, Copthall-buildings, London.

### HALLETTE'S ATMOSPHERIC RAILWAY AND CANAL.

PROFUSION COMPANY.  
 (PROVISIONALLY REGISTERED.)  
 Capital £300,000, in 20,000 shares, of £15 each.—Deposit £1 per share—viz.: 1s. 6d. per share on allotment (being the largest amount allowed to be received previous to complete registration, under 7 and 6 V.C. 110), and the remainder (18s. 6d. per share) immediately on complete registration.

PROVINCIAL DIRECTORS.  
 Geo. Lewis Hollingsworth, Esq.  
 George Thomas Esq., Esq.  
 Lieut.-Colonel Williams, R.E.  
 (With limited power to add to their number.)  
 ENGINEERS—M. A. Hallette and Lieut.-Colonel Williams, R.E.  
 SOLICITORS—Messrs. Lane and Pridemore.  
 BANKERS—Messrs. Williams, Deacon, and Co.

The chief objects of this company are to carry into effect a conditional arrangement entered into with Messrs. Hallette for the purchase of his patent for all Europe, and to set licenses to use it.  
 The promoters confidently believe that the atmospheric system of Messrs. Hallette is the most perfect and economical that has been invented for propulsion on railways and canals, and in this opinion they are supported by that of many eminent men of science and experienced engineers. By the arrangement entered into with the inventor, the deposit will be more than will be required until a contract to use the patent on a railway has been actually signed; and, under any circumstances, it is believed that £4 per share will be ample to carry out fully the objects of this company. The risk, therefore, will be small, whilst the profit by sale of licenses, &c., in the event of the superiority of the invention being acknowledged, must be immense.

A detailed prospectus, with form of application for shares, may be had at the company's offices, Winchester-house, Old Broad-street; or of Mr. J. H. Golding, broker, Warncourt, Throgmorton-street, London.

### ATMOSPHERIC LINES.—HALLETTE'S PATENT.

The attention of directors, shareholders, and the public, is directed to this important SYSTEM OF ATMOSPHERIC PROPULSION, which is the most simple, perfect, and economical in working.  
 Offices, Winchester-house, Old Broad-street, London.

### PILBROW'S ATMOSPHERIC RAILWAY AND CANAL.

PROFUSION COMPANY.—Completely Registered.  
 DIRECTORS.  
 The Right Hon. the Earl of Essex, Chairman.  
 The Right Hon. the Earl of Hereford.  
 G. B. Bolton, Esq.  
 Lieut.-Colonel Gillies.  
 F. J. Lumbert, Esq.  
 Dr. J. G. Hewlett, Resident Director.

Directors of Railway and Canal Companies are informed that this company is now READY TO GRANT LICENSES FOR, OR SUPERINTEND THE LAYING DOWN OF LINES ON PILBROW'S ATMOSPHERIC PRINCIPLE.  
 The advantages offered by this method of propulsion are cheapness, increased speed, and safety, over every other existing system, whether locomotive or atmospheric. Leakage is entirely avoided, the tube being buried. Also an immense saving, as well in the construction as in the working of lines, not requiring tunnelling, levelling, or embankment. The surface requires but little more preparation than for the common roads.  
 The application of this method of propulsion to Canal Navigation will be attended with incalculable advantages.  
 Its superiority, efficiency, and simplicity, will be demonstrated, and explanations given, at the offices of the company, 6, King William-street, London-bridge.  
 CHARLES COLLINS, Secretary.

### PROSSER'S EXPERIMENTAL RAILWAY AND BURNETT'S PATENT.

The attention of Railway Companies, Builders, and others, is respectfully called by the proprietors of Sir William Burnett's Patent, to the WOODEN RAILS Laid down at PROSSER'S EXPERIMENTAL RAILWAY ON WIMBLEDON COMMON; part of which, having been prepared by their process, is addition to being effectually preserved from dry-rot, will be found to exhibit all the characteristics of thoroughly seasoned timber, although only cut down in the month of May last, and prepared while in a perfectly green state.  
 Hydraulic Apparatus and Tanks—Millwall, Poplar, nearly opposite Greenwich-bridge.  
 OFFICE, 53, KING WILLIAM-STREET, LONDON-BRIDGE.

### PAYNE'S PATENT PROCESS FOR THE PRESERVATION AND IMPROVEMENT OF TIMBER.

—PAYNE AND LODGE beg to invite the attention of Engineers, Railway Companies, Architects, and others, to the ABOVE PROCESS, and to state that they are prepared to ERECT the necessary APPARATUS in any part of the United Kingdom, where the quantity is sufficiently large to cover the cost of its removal.—Further particulars can be obtained at WHITEHALL WHARF, CANNON-Road, WESTMINSTER, or at their other stations:—FLEETWOOD-ON-WYRE, LANCASTHIRE, UNION WHARF, SOUTHAMPTON, and WISBEACH, CAMBRIDGESHIRE, GUILDFORD, SURREY.

### THE PROJECTED RAILWAYS.—ANALYSIS OF THE PATENT METALLIC SAND, OR ENGLISH POZZOLANO, used in the foundations of the New Houses of Parliament, the great tunnels on the Birmingham Railway, &c.

on the Great Western Railway, in Devonshire, and other important works, referred to more particularly in the prospectus:—  
 Silica ..... 40  
 Oxide of iron ..... 20  
 Alumina ..... 6  
 Lime ..... 6  
 Magnesia ..... 2  
 Zinc ..... 2  
 Arsenic and carbonate of copper ..... 2

Used as an external Stucco, the Metallic Sand Cement is cheaper than Roman Cement—unaffected by frost or wet—in appearance resembles the best Portland stone—requires neither colour nor paint—and is entirely free from vegetative cracks and blisters, to which Roman Cement is liable.  
 Prices in Swansea, free on board ..... 6d. per bushel;  
 Or supplied in London at ..... 1s. per bushel.  
 Further particulars, on application to Mr. C. K. Dyer, 4, Mark Lane, London; or at the Metallic Sand Wharf, opposite Pratt-street, King's-road, Camden New Town.

### HARVEY AND WEST'S PATENT VALVES.

APPLICABLE TO PUMPS OF EVERY DESCRIPTION.  
 The superiority of these valves, as economical in respect both of trouble and expense, has been proved by the experience of their GENERAL USE for more than SEVEN YEARS.  
 The patentees refer to nearly all the water-works, engineers in the kingdom, by whom satisfactory testimonials have been freely given.  
 The principle adopted is that of "OBTAINING THE GREATEST WATER PASSAGE BY THE LEAST POSSIBLE PRESSURE AREA," thereby avoiding the great obstruction occasioned by the closing of ordinary valves, and the loss caused by letting in air under them.  
 Until the invention of these valves (first used at the East London Water-Works), the most economical mode of raising water—viz., by the plunger-pump, and the principle of expansive steam, as practised in Cornwall, was impracticable for water-works purposes.  
 Sketch A shows the manner in which the valves have been applied to air-pumps of steam-engines.  
 Sketch B, the manner of their application to pumps for lifting water.  
 The Valves are shown open in both Sketches.

Address Messrs. HARVEY AND WEST,  
 HAYLE FOUNDRY, CORNWALL.  
 PRINCIPAL MANUFACTURERS  
 Messrs. HARVEY AND CO.,  
 HAYLE FOUNDRY, CORNWALL.

London:—Printed and Published, weekly, by HENRY ENGLAND, at the Office, No. 36, FLEET-STREET.  
 In the city of London, where all Communications and Advertisements are requested to be forwarded—addressed to "The Editor"—post-paid. [November 8, 1845.]